THE HOROSCOPE,

A Monthly Magazine of Science and Literature.

APRIL, 1841.

HISTORICAL SKETCH OF ASTROLOGY.

The history of Astrology is the history of the world; for from the earliest ages we may trace its existence, and learn that in every civilised nation the ablest men, the most remarkable geniuses, have been known to hold the opinion that astral influences on this world are part and parcel of the laws of nature. It is with a view of enabling the readers of this work to perceive this fact in its full force, that we have thrown together a few sketches of the origin and progress of Astrology among the various nations of men, from the earliest days to the present time.

If the writers of our own day, who inveigh so bitterly against Astrology and Astrologers, would ask themselves whether, considered *à priori*, the question of astral influence—or, indeed, any other question—which has ranked among its supporters, in all ages and in all nations, the choicest spirits of our race, be not at least within the bounds of probability, they might perchance evince a little more modesty in their language when treating thereon.

If the arrogant but mistaken writers in the *Athenæum*, who have recently termed the scientific labours of the renowned Tycho "the charlatanerie of the alchemist and the fortune-teller," would examine the *grounds* upon which Tycho founded his astrological opinions, they would find that not only did his sufferings arise, as they themselves admit, from "the ignorance and misapprehensions of contemporary opinion," but that the posthumous insult offered to his memory by the Englishman who penned the remark arises from the grossest "ignorance and misapprehension." Modern scientific writers are generally quite ignorant of the facts which astrologers build their science upon; but a greater evil than this is, that the public, that is, general readers, are misled by the false lights held out for their guidance by these writers, The result is, that both the *nature* and the *history* of Astrology are almost totally misapprehended, and the mischievous consequence is that, as the blind lead the blind, both fall into the ditch of foul and injurious falsehood, where they bespatter the lovers of truth with the mire of "ignorance and misapprehension." Time, the great physician, will prescribe a remedy for these evils, when it shall please Providence to open the eyes of these blind guides; and that a drug for their disease may not be wanting, we have penned the following account of Astrology and Astrologers in "the days of other years."

EGYPT.

The first Egyptian astrologer of importance was Hermes, who lived at a period anterior to Moses, as the Jewish lawgiver is declared to have been learned in all the wisdom of the Egyptians; and we know that the *magia* or "wisdom" of Egypt was connected with *astra logos*, the wisdom of the stars, from which words the English word Astrology is derived. In proof of the existence of this personage among the Egyptians, Dr. Cudworth observes as follows:—

"That there was anciently amongst the Egyptians such a man as Thoth, Theuth, or Taut, who, together with letters, was the first inventor of arts and sciences, as Arithmetic, Geometry, Astronomy, and of the Hieroglyphic learning (therefore called by the Greeks Hermes, and by the Latins Mercurius) cannot reasonably be denied, it being a thing confirmed by general fame in all ages, and by the testimonies, not only of Sancuniathon, a Phœnician historiographer, who lived about the time of the Trojan war, and wrote a book concerning the *Theology of the Egyptians;* and Manethos Sebennyta, an Egyptian priest, contemporary with Ptolemy Philadelphus; but also of that grave philosopher Plato, who is said to have sojourned thirteen years in Egypt, that in his *Philebus* speaks of him as the first inventor of letters (who distinguished between vowels and consonants, determining their several numbers), there calling him either a *god* or a *divine man.*

"Again, besides this Thoth, or Theuth, who was called the *first* Hermes, the Egyptians had also afterwards another eminent advancer or restorer of learning, who was called the *second* Hermes; they, perhaps, supposing the soul of Thoth, or the *first* Hermes, to have come into him by transmigration. But his proper Egyptian name was Siphoas, as Syncellus, out of Manetho, informs us:—'Siphoas (who is also Hermes) the son of Vulcan.' This is he who is said to have been the father of Tat, and to have been surnamed Ter Maximus* (he being so styled by Manetho, Jamblichus, and others). And he is placed by Eusebius in the fiftieth year after the Israelitish *exitus*, though probably somewhat too early. The former of these two Hermes was the inventor of arts and sciences; the latter the restorer and advancer of them. The first wrote in hieroglyphics upon pillars; the second interpreted and translated those hieroglyphics, composing many books in several arts and sciences, which *Trismegistic* or Hermetic books were said to be carefully preserved by the priests in the interior recesses of their temples. Now, that some of those ancient Hermaick books, written by Hermes Trismegist himself, or believed to be such by the Egyptians, and kept in the custody of their priests, were still in being and extant amongst them after the times of Christianity, seems to be unquestionable, from the testimony of that pious and learned Father Clemens Alexandrinus, he giving this particular account of them, after mentioning their opinion concerning the transmigration of souls:—'The Egyptians follow a certain peculiar philosophy of their own, which may be best declared by setting down the order of their religious processions. First, therefore, goes the *Precentor*, carrying two of Hermes

* Thrice great.

his books along with him, the one of which contains the Hymns of the Gods, the other Directions for the Kingly Office. After him follows the HOROSCOPUS, who is particularly instructed in Hermes his *Astrological* books, which are *four*. Then succeeds the *Hierogrammateus*, or sacred scribe, with feathers upon his head, and a book and rule in his hands, to whom it belongeth to be thoroughly acquainted with the hieroglyphics, as also with cosmography, geography, the order of the Sun and Moon and five planets, the chorography of Egypt, and description of the Nile. In the next place cometh the *Stolistes*, who is to be thoroughly instructed in those ten books which treat concerning the honour of the gods, the Egyptian worship, sacrifices, first-fruits, prayers, pomps, and festivals. And, last of all, marcheth the prophet, who is president of the Temple and sacred things, and ought to be thoroughly versed in those other ten books called sacerdotal, concerning laws, the gods, and the whole discipline of the priests. Wherefore, amongst the books of Hermes there are forty-two accounted most necessary, of which thirty-six, containing all the Egyptian philosophy, were to be learned by those particular orders before mentioned; but the other six, treating of medicinal things, by the *Pastophori*.'

"From which passage we understand, that at least forty-two books of the ancient Hermes Trismegist, or such reputed by the Egyptians, were still extant in the time of Clemens Alexandrinus, about 200 years after the Christian epocha."

Now, as regards the astral science among the Egyptians, it is worthy of remark that the astrological books of Hermes were said, in the above account, to be *four* in number; and we find that Claudius Ptolemy, the great Egyptian astronomer, geographer, and astrologer, entitles his book on this science "The *Tetrabiblos;* or, *Four* Books of the Influence of the Stars;" whence it becomes extremely probable that, as he wrote in the second century, he gave the world therein the very four books of Hermes already mentioned, or at least a considerable portion of their contents. This is the more probable, because he speaks continually of the "rules of the ancients," and of "ancient writings," and of the doctrines "handed down and recommended in the writings of the Egyptian authors." And all through the "Four Books" we see that the author pretends to few or no discoveries of a modern nature; whence we may conclude that the writings of Ptolemy are really founded on the very ancient works of HERMES himself.

BABYLON.

According to Diodorus, we learn that "the Chaldeans in Babylon, being colonies of the Egyptians, became famous for Astrology, having learnt it from the priests of Egypt."

Sir Isaac Newton observes that, "in the beginning of the reign of Nabonassar, King of Babylon, the Æthiopians under Sabacon invaded Egypt (751 B. C.), and that those Egyptians who fled from him to Babylon carried thither the Egyptian year of 365 days, and the study of Astronomy and *Astrology*." But this date for the *origin* of Astrology we have already shown to be unfounded. As regards the extent to which Astrology was carried in Babylon, we may form an idea from

the frequent reference to it by the prophets Isaiah, Daniel, and others. The celebrated Zoroaster, the legislator of the *magi*, or wise men of Chaldea, adopted it, and became famous therein; and it is generally believed that he was the originator of *magia* or magic, which at first was a good principle, being, as Porphyrius declares, the worship and knowledge of the Deity. "This *divine magic* of Zoroaster shortly after degenerated in many of his followers," says Dr. Cudworth, "into *Theurgical magic*, and at length into *Goulia*, downright sorcery and witchcraft, the only thing which is now vulgarly called *magic*." It is this, we may observe, *en passant*, with which the pure and simple doctrines of astral influence have been too long confounded by those who are only excusable because of their ignorance of what *magic* did in reality mean.

The term Zoroaster signified, in the ancient Persian, *a worshipper of the stars;* and it was bestowed, after his death, upon the celebrated Zertoost, or Zaradust, called by the Greek writer Agathias by the name of Zarades. He has been confounded by Sir Isaac Newton with another, or second Zoroaster, or star-worshipper, who was a native of Persia. According to Justin, the latter was a king of Bactria, and lived before the Trojan war, in the age of Ninus, King of Assyria, above 2000 years before Christ. He rendered himself known by his researches in philosophy, and the cosmogonia, or origin of the world, and by the study of Astronomy. His followers are still found in India —that is, the followers of the Persian Zoroaster. The first was, according to some authors, an astronomer of Babylon, who lived 2459 years before Christ. And this we are inclined to believe, because of the existence of *magicians* (that is, philosophers who believed in a *vital sympathy* through the universe) being found in Egypt long prior to the time of the Persian Zoroaster, and of whom we read that they were called on by Pharoah to display their *Theurgical* powers, which were certainly a corruption of the original *divine* magic; and, of course, the latter had been discovered long previously.—See Exodus, vii. 11. "Then Pharoah also called the *wise men*, and the sorcerers. Now, the magicians of Egypt they also did in like manner with their enchantments." The original is חרטמי, heretemi, scribes or clergymen, which seems to be the origin of the Chaldee term חרטם, heretem; which Dr. Andrews renders, "a caster of nativities, a fortune-teller." But though undoubtedly the priests or seers were diviners, and did answer questions of lost goods, &c., as related in I. Samuel, ch. ix., yet this profession was distinct from that of the אשפם, ashepim, or astrologers. We are the more inclined to consider that these seers of Egypt were the *priests*, because Josephus, in relating this passage of the life of Moses, says distinctly that the King accused Moses of performing his miracles by "*magical* arts to astonish him (the King);" and he adds, "when he had said this, he commanded the PRIESTS to let him see the same wonderful arts, as knowing that the Egyptians were skilful in this kind of learning."

PERSIA.

The people of Persia, who were neighbours to the Bactrians, were early famous for both magic and astrology. The restorer of the ancient

religion of the magi is thought to have lived about 589 years before Christ; but Newton says that he lived in the reign of Darius Hystaspis, 520 years B.C., and assisted Hystaspis, the father of Darius, in reforming the magi, of whom Hystaspis was master. Of this Zoroaster, or star worshipper, Porphyrius writes, "Zoroaster, first of all, as Eubulus testifies, in the mountains adjoining to Persia, consecrated a native orbicular cave, adorned with flowers, and watered with fountains, to the honour of Mithras, the maker and father of all things; this cave being an image, or symbol to him, of the whole world, which was made by Mithras." By this we may see that the initiated in the Mithraic mysteries did not confine their worship to the *sensible sun* alone, which was nevertheless generally worshipped by the Persians as a god; from which worship was derived that of fire in general, it being regarded as a symbol of their sun-deity. Indeed, one of the oracles of the magi ran thus: "*All things are the offspring of one fire;*" that is, of *one deity*. It may be observed here that the ancient Hebrew term for an astrologer was אשף, ashep, compounded of אש, ash, *fire*, and ף, pe, *to open;* the stars of heaven being called the *fires* of heaven, and believed to be gods, the astrologers were so named apparently because they opened the secrets of the stars to mankind.

But as regards the ancient magi of Chaldea and the first Zoroaster, *they* called the supreme god OROMASDES; and Plutarch relates that it was one of their traditions, that "Oromasdes was as far removed from the Sun as the Sun was from the Earth." And they called the first day of every moon *Ormasda*, which meant the fountain of light, or original of all good. Thus they did not literally worship the sun as an independent deity, but merely as the type of the universal Father. Another famous Persian philosopher lived in the reign of Darius Hystaspis, whose Persian name was Gushtasp, of whom the "Ancient Universal History" contains the following remarks: "In the reign of Gushtasp, King of Persia, flourished a celebrated astrologer, whose name was Gjamasp, surnamed Al Hakim, or the Wise. The most credible writers say that he was the brother of King Gushtasp, and his confidant and chief minister. He is said to have predicted the coming of the Messiah; and some treatises under his name are still current in the East." Dr. Thomas Hyde, speaking of this philosopher, cites a passage from a very ancient author, who wrote an account of ten very famous Persian doctors, as follows: "Of these, the sixth was Gjamasp, an astrologer, who was counsellor to Hystaspis. He is the author of a book entitled, 'Judicia Gjamaspis,' in which is contained his judgment on the planetary conjunctions. And therein he gave notice that Jesus should appear; that Mahommed should be born; that the magian religion should be abolished, &c.; nor did any astrologer ever come up to him."

The modern Persians are still most devoted votaries of Astrology, and although they distinguish between it and Astronomy, they have but one word to express astronomer and astrologer, viz., *manegjim*, which is exactly equivalent to the Greek word *astrologos*.

It is remarkable that the kings of Persia pay very large salaries to their astrologers, expending about six millions of livres on them yearly; and that none of the learned men of Persia have been able to detect the fact that there is not truth in their predictions, and that their science is

all a mere delusion. The *Athenæum* of the 25th February, 1837, contains a very interesting account of the literature of Persia, which account mentions that "the belief in astrology is as strong as ever." And we can hardly believe that the literature of Persia is so defective, that no one ventures to put forward a confutation of astral doctrines by an appeal to fact, which should show them to be contradicted. This, however, has not yet been done even in England, though we are sure that the book would be popular if it could be written. We fear the philosophers have tried and failed, for facts are stubborn things.

ASTROLOGY OF THE GREEKS.

When the Egyptian and Phœnician colonies arrived in Greece, they carried with them to that savage country the arts and sciences of their native land. So early as the thirteenth or fourteenth century before the Christian era, the position of the stars with regard to the circles of the sphere was established with great exactness—a strong proof that the sphere described by Eudoxus* was the production of a more perfect system of Astronomy, and that the Greeks merely changed the names of the constellations in honour of the adventurous Argonauts. In this fabulous period of Grecian history, it is impossible to ascertain the state of Astronomical science, or even to name the individuals who contributed to its progress. Atlas, Hercules, Linus, Orpheus, Palamedes, &c., are all mentioned as improvers of Astronomy; but it is not until the seventeenth century before Christ that the obscurity of ancient fable begins to be chased away by the light of authentic history.†—*Brewster's Edinburgh Encyclopædia.*

One of the earliest Astrologers of Greece was the celebrated Anaximander, the friend and disciple of Thales. He was born in the year 610 B. C., and was the introducer of the sphere (which he had from Egypt), and of sun-dials, geographical charts, &c. Dr. Brewster, speaking of him, says, "Guided by analogy, Anaximander regarded the planets as unconnected with this little globe which we inhabit. He taught that they were peopled by animated beings, and that the fixed stars were centres of other systems, perhaps more extensive and glorious than our own." According to Pliny (ii. 29), he was an able astrologer, and "foretold the earthquake which overthrew Lacedomon."

Another famous philosopher of Greece, preceptor to Socrates, Euripides, and Pericles, was Anaxagoras, who devoted his whole life to the study of Astrology. He was acquainted with the lunar eclipses; and, "anticipating in his sagacious mind the discoveries of the telescope, he taught that the Moon was a habitable world, and contained seas, mountains, and valleys, like our own globe." According to Pliny, Plutarch, and other writers, he predicted that a stone would fall from the Sun into the river Egos, in Thrace—which very remarkable prediction was exactly fulfilled in the second year of the 78th Olympiad.

* He was the first among the Greeks who brought the year to the Egyptian account. While the Egyptians were for centuries pursuing the sublime studies of Astronomy for the practical purposes of Astrology, the Greeks were in a state of the rudest barbarism. Eudoxus was a native of Cnidus; he died 368 A. C.

† If, as the adversaries of Astrology declare, the planets were named after great men, how is it that they were not named from these astronomers, who were deified?

Pliny mentions that "it happened accordingly, in the sight of many, in the daytime, a comet blazing at the time." And he adds (ii. 58), that "this stone was as big as a waggon could carry, and was kept for a monument."

After these followed the immortal Pythagoras and Plato. The former learned and practised the Astrology of the Egyptians and Chaldeans; and the latter, "the most learned and eloquent of the Greeks," was a staunch supporter of the doctrines of astral influence. To these we may add Porphyry, Aristotle, and several others among the ancient Greeks, and Proclus some centuries later. But of all the celebrated men of Greece, there was none who stood higher than the great Hippocrates, the father of the art of medicine. He was called "the great," "the divine," and after death received the same honours as were paid to Hercules. And what says he of this science? Why, he declares that the man who did not well understand Astrology was rather deserving to be called a *fool* than a *physician*. According to Galen, his opinion was as respectable as the voice of an oracle, and he expressly declares that diseases are influenced by the motion of the Moon and the planets. This, as a fact, we are in the daily habit of witnessing; and any medical man who will make a trial of Astrology will soon discover this to be the case, and will be quickly able to detect the most hidden seat of any disease.

ROME.

Among the famous men of Rome we find Virgil, in his *Georgics*, adopting almost every rule for foreseeing the weather from the Greek poems on Astrology by Aratus; also Cicero, in his *Timæus* and other works; although it is true that he spoke against the rules of the Chaldean astrologers, which, no doubt, like those of the modern Europeans, had become corrupt and erroneous. To these we may add Propertius and Macrobius among the poets, and certainly Horace. Macrobius wrote a poem to elucidate Astrology. And we claim also the most learned of all the Romans, whom the famous grammarian Gellius expressly calls "*Romanæ civitatis doctissimum*," the MOST learned of the citizens of Rome—we mean Nigidius Figulus, a senator and *prætor* of Rome, the intimate friend of Cicero. He was famous as a philosopher and astrologer; and the historian Suetonius states that "he foretold, at the birth of Octavius, that he should be lord of the world, having taken the hour of his birth."

It was not against the science of his friend, whom he eulogises for his singular excellency in all parts of learning, divine and human, more particularly in physic and *Astrology*, that Cicero wrote when he condemned the doctrines of the Chaldeans, any more than we can be said to deny Astrology because we have condemned the follies of the middle age and some of the Arabian astrologers. There have been quacks in all professions, and in all ages and times; but their existence does not disprove the reality of genuine science.

ARABIA.

After the appearance of the famous Mahommed, in the 7th century, and the conquest of the Persians by his followers, we find literature

flourished eminently under the Caliphs; and about the year 815 the works of Ptolemy were ordered to be translated into Arabic by the celebrated Mamoonorrasheed, the sixth caliph, "who was," says Meerza Ibrahim, "the most accomplished of his race. He was profoundly versed in literature and science." After his reign the famous Albumazar of Bulch (scholar of Alkendi, a Jew, who was professor of Judicial Astrology at Bagdad, during the caliphate of Mamoon), became wonderfully famous. "He wrote," say the authors of the Universal History, "expressly from the Persian astrologers, and it may be from the works of Gjamasp, since he (Albumazar) also reports a prediction of the coming of Christ."

Among the Arabian astrologers were also Messahala, Albategnius, Haly, and the famous Haly Aben Rodoan, with numerous others, who ranked among the most brilliant lights of Arabian science, when Europe was wrapped in the gloom of Vandalism. It was these men (to whom we are indebted for the knowledge of the ciphers of arithmetic, and who taught us Algebra) to whom Astrology owes its greatest obligations; although it is true that they had some superstitious notions. And now every trumpery newspaper-writer will tell you they were all in a delusion forsooth, and could not for their lives perceive that all their calculations and all their predictions were mere nonsense. It is passing strange that they could not see that their rules were opposed to the facts in nature—which they must have been, if astral science be indeed unreal. It is most strange that neither the orthodox followers of the Prophet, nor the sundry sects into which his followers were divided, ever took it into their heads to denounce one another as impostors, on the score of their belief in Astrology, or that, keen logicians and able mathematicians as they were, none should ever rise up in the land, and deny the universal "delusion," as it is now termed;—that none should discover that the predictions of the most famous astrologers were nought but the baseless fabric of a visionary dream.

ENGLISH AND EUROPEANS.

If we pursue the course of learning among the Saracens or Arabs, we find it came into Spain by their means, and rapidly spread over the greater part of Europe. The works of Ptolemy were first translated from the Arabic into Latin by order of the Emperor Frederic II., in the 13th century; and the celebrated Alphonso, King of Castile, caused a Spanish version to be made; and in 1538 the Greek text of Ptolemy's works was published at Basle.

But little appears to have been known of the genuine source from whence all modern Astrology has originally flowed (the works of the "divine Ptolemy," as the Greeks termed him), subsequently to the days of Proclus the Greek, who was rector of the Platonic school at Athens, where he died in 485. His improved text of the *Tetrabiblos*, or Four Books, was never fitly translated into English until the year 1822; since which time Astrology has made rapid progress. The general ignorance of this work during the middle ages gave birth to many absurd notions regarding Astrology; and as some of the corrupt remnants of Oriental *magic* still existed in Europe, the enemies to Astrology contrived to have it confounded with *magia, goulia,* sorcery, or

witchcraft. And this delusion was very general until within these few years past, and still is very frequent.

The great names in the scientific world, the leading mathematical writers after the downfall of the Roman empire, have nearly all been famous for their devotion to the doctrines of astral influence. Among these we find the famous Cornelius Agrippa, of Cologne, secretary to the Emperor Maximilian, who, in 1529, was invited to England by King Henry VIII., but who still had the honesty to write against the King's divorcing his wife. Also Jerom Cardan, a physician of Milan, born in 1501, who was a most learned man and celebrated algebraist, who gave rules for resolving cubic equations, which still bear his name. He was sent for to cure the Archbishop of St. Andrew's of a cruel disorder, which baffled all the physicians of France and Germany; and having succeeded, he returned through London, where he calculated the nativity of King Edward. In the year 1647 flourished the not less famous Placidius de Titus, an Italian monk, who published many elaborate works on Mathematics, especially his Celestial Philosophy and the *Primum Mobile*, in which he gave the nativities of thirty eminent men in Europe, to demonstrate the truth and reality of the doctrines of Ptolemy.

Among the purely English astrologers we find almost every man of any note as a mathematician, from the days of the Conquest down to those of Lord Bacon.

We begin with Oliver of Malmesbury, in the year 1060, who is the oldest English writer known, as regards mathematics. We next find Herbert of Lorraine, 1095; John of Hexham and Simeon of Durham, in 1160 and 1164, who wrote on comets; Ægidius of St. Alban's, in 1224, physician to the King of France, who wrote on Astronomy—and as Astrology and physic were always combined, must have been an astrologer; Roger Bacon, born in 1214, who was the friend of Fisacre and Shirewood, both known as mathematical writers, and of Robert Grouthead, the bishop of Lincoln. He was the most extraordinary man of his day, and spent the enormous sum, in those days, of 2000*l.* in experiments, instruments, and scarce books. In his works he spared neither the ignorance nor want of morals of the clergy, who found, therefore, no difficulty in possessing the vulgar with the idea that he was possessed with the devil. In 1256 died the famous John of Halifax. His name was really John Holywood, but he was known on the continent as Sacrobosco. "His work on the sphere was for centuries almost as general an object of study as Euclid himself." It was written from Ptolemy's *Almagest*, translated into Latin from Arabic by order of the Emperor Frederic II. Before Newton, he was one of the ablest men England ever produced. We may also reckon Michael Scot, the famed wizard of Scotland, in 1290; Duns Scotus, in 1304; William Grizaunt, 1350; Clinton Langley and John Killingworth, 1360; John Estwood, 1365; John Chylmack, 1390; King Richard II., in 1392, who is asserted by Sherburne to have written "something in Astronomy or Astrology, now (1675) extant in his Majesty's library at St. James's." The poet Geoffry Chaucer wrote a treatise on the Astrolabe, 1410. "John Walter, 1410, wrote astronomical tables for the purposes of Astrology; and appears," says a modern writer, "to have been more esteemed than we might now suppose would have been the case."

The good Duke of Gloucester (1440) composed astrological tables of directions. There were several other famous English authors, whose names we omit to mention, but we must particularise "the founder of the school of English writers (to any useful or sensible purpose), Robert Recorde, the physician, a man whose memory deserves a much larger portion of fame than it has met with, on several accounts. He was the first who wrote on arithmetic in English; the first who wrote on Geometry in English; the first who introduced algebra into England; the first who wrote on Astronomy and the doctrine of the sphere in English; and finally, the first Englishman who adopted the system of Copernicus." A writer in the Companion to the Almanac for 1837 observes, "We gather that Recorde had not abandoned Astrology." We may, subsequent to the time of Recorde (1558), notice John Dee, the famous Dr. Dee, who professed magic also, by way of showing that this was an exception, and not the general rule. He died 1572. There followed some others of note, among them John Blagrave, whose descendant Joseph Blagrave's work on Astrology still exists, published in 1682. Lastly we come to the great Viscount St. Alban's, Lord Verulam, the famous Bacon. The writer already named says, "*We may be certified of the universality of the belief in Astrology by observing how few wrote against it.*" Bacon was what we may call a corporeal astrologer. He admitted the influence of the heavenly bodies on the mind *through the body*. With this great man the astrologers may rank the prince of modern mathematicians, the Baron Napier, to whom the world is indebted for the invention of logarithms. Of him, one of his contemporaries says, he was "a general scholar, and deeply read in all divine and human histories." And finally, they may enumerate the names of Elias Ashmole, the founder of the Ashmolean Library, Oxford, and his well-known friend, the celebrated Wm. Lilly, one of the ablest astrologers England has produced, whom it has been the fashion to ridicule, only because it has been such to *assume* as a matter absolutely proved, that there is no truth in the science he professed. The whole question of his merits turns upon that of the reality or non-reality of astral influence. If it exist, he was a wise and a good man; if it do not exist, he was the reverse. It is rather too much to condemn him and the other old English professors of the science, until better evidence than mere assertion of their errors can be adduced.

CHINA, INDIA, SIAM, CEYLON, THE BUDDHISTS, &c.

If we step aside from tracing the march of astral science towards our own day, and our own quarter of the globe, we find it firmly established among the learned Chinese from the earliest periods. We find that from the days of Fohi, about 2752 years before Christ, for nearly 2500 years, Astronomy (which, as Dr. Brewster admits, was studied solely for the purposes of Astrology) was held in the highest veneration in China, emperors being chosen on account of their knowledge of the heavenly bodies. And we are told that this was expressly the case with Chueni, in the year B.C. 2513, who himself composed an ephemeris of the motions of the five planets, a great conjunction of which he is thought to have observed, as it happened in the year 2449.

The Indians have been shown, by M. Bailly and Professor Playfair, to

have been intimately acquainted with Astronomy (for the same purposes as the Chinese) at the epoch of the Tirvalore Tables, which coincides with the year 3102 before the Christian era.

The Siamese have always been devoted to Astrology; and the acute and metaphysical priests of Buddha, in Ceylon—speaking of whom, Mr. Upham says, "the reasoning powers of the Buddhists are of a very high class"—are all believers in the influence of the stars, their very religion being founded on this belief; for the last *Budha*, it has been pretty clearly shown, was no other than the Persian or second Zoroaster himself. And it must be remembered that 5000 years of its practice have not yet sufficed to point out to these millions of our fellow-creatures (probably including 200 millions of Buddhists, and about the same number of Chinese, besides all the Hindoos, who wisely never marry without comparing the horoscopes of both parties, Gentoos, &c.), that the whole thing is a dream, a fiction, the mere idle delusion of imagination. It is true, we find alike the gravity of the Indian, the Egyptian, the Chaldean, the Chinese, and the Siamese, the gaiety of the ancient Athenian, the sparkling wit of Attica, the keen penetration of the scientific Arabian, the laborious research of the ingenious German, and the mighty genius of the inventor of logarithms, all accord to declare for the reality of astral influence on the minds, the bodies, and the circumstances of mankind. We find all nations agree in this one important point, differing widely as the winds on all others. We find the Egyptian Hermes, the Persian Zoroaster, the Greek Hippocrates, the Chinese Confucius, the Galen of Rome, the Al Hakim of Persia, the Mamoon of Arabia, the Kepler and Tycho Brahe of Germany, the Bacon of England, and the Napier of Scotland, with a long list of others, great and good, join hands in the great circle, as it were, to receive the same electric shock with the greatest geographer and astronomer of antiquity, the renowned Claudius Ptolemy. We find, be it marked, a common bond of belief in the providence of the Deity, by means of these his instruments, the heavenly bodies, stretching from China through Arabia, Persia, and Babylon, to Greece—from the Indus and the Ganges to the Nile, and thence to the Euphrates, the Rhone, the Tiber, and the Thames; and never did we find that bond broken, until the hydra of Atheism began to rear its head in the confines of western Europe in the 17th century. Then, when men began to question the existence of a Deity, they might well deny and refuse to examine the means by which the wise, and great, and good of all ages had believed he acted; for *vox stellarum vox Dei*, the voice of the stars is the voice of God, was a maxim of universal acceptance, never generally denied, or even doubted, until of late years, and certainly only in this our day of boasted knowledge denied, by a very small portion of mankind—and of them only by those who have never sought to understand that voice. It is the utter absence of humility, the *pride* of human wisdom, that bane of man, which has led the learned to dare to deny the acts of God, "because, indeed," say they, "we cannot *see how* the thing is—we cannot understand the *mode* by which God governs this small portion of the solar system, in connexion with the other and more stupendous portions, and therefore we will not believe the thing possible." What, ask we, is this but the argument of

the Atheist, the fool who hath said in his heart "there is no God to be *seen*, and therefore there is no God?"

Among all the learned writers of the present day, with science pushed to the utmost pitch, as it were, we find no other manner of disproving astral influence; we find no great geometer who steps forward to declare that *he* can adduce a case in which the laws of Hermes, as handed down by Claudius Ptolemy, are found opposed to the facts in nature; that he can demonstrate that, when the planet Jupiter is rising at the birth of an individual, the same effects follow as when the planet Mars may be rising; or that the man born with the Moon joined to Saturn is the same in personal form and character as the man born when the Moon is joined to Venus. Yet such, we submit, would be the fit and proper mode to overthrow the Hercules of ancient and, as we have shown, universal belief in those facts. For, be it well considered, that however ignorant pretenders to Astrology may have differed in their rules and manner of adopting the great principles of the science, none ever yet dared to deny the great Egyptians' principles, the very foundation of the whole system—THE VARIOUS POWERS AND QUALITIES OF THE PLANETARY BODIES. None, from India to England, ever depicted Mars as having the qualities of Venus; none ever taught that Saturn was benefic, and the mighty Jupiter the reverse. In Persia, to this day, it is declared that evil will fall upon that land, in the form of *earthquakes*, when an eclipse of the Sun occurs in its ruling sign, the sign *Taurus;* and this doctrine is equally admitted by the astrologer of Persia as by him of England. And why is it so admitted? Simply, because in the days of the early Chaldeans, some four to five thousand years ago, the fact accompanied the phenomenon, and that it has continued to do so to this day. Hence we see that the leading principles of this mighty ocean of philosophy are one and universal, one and the same in ancient as in modern days; formed by the Deity, and depending on the very existence of the universe, they are, like its motions, devoid of failure and indestructible; for while the planets and the Sun hold their mutual relations, they must continue to move and to act one upon the other (including this Earth) in the manner they ever have moved and acted. Of them it may justly be observed, that "there is nothing new under the Sun." They are not the work of man's hands, but derive their commission to do his will from the fiat of Him who said, "Let there be light, and there was light." Whether man believe in their power to influence him or not, they will do so, if they do so, as long as the world endures. The only gift in the hand of man is the power to detect the times and the degrees of their influence; and, by the free agency of his will, to withhold his assent to their influence to evil, when such it becomes, and to receive their benefits and apply them to his own good, and that of his fellow-creatures. For the right use of this gift he will assuredly be responsible; and equally so for its contemptuous rejection.

THE REALITY OF ASTRAL INFLUENCES VERIFIED BY THE FULFILMENT OF PREDICTIONS DURING TEN YEARS.

We desire to test the doctrines of planetary influence on this earth and its inhabitants by the sternest and most rigid investigation. And to the assertion, that Astrology will not enable us to foresee events, we reply by showing that they *have* been foreseen and foretold, as the following statements will demonstrate. If it be objected, as it has been, that "chance" only leads to these agreements between the event and the prediction, we reply, that there is no such thing as "chance;" and we desire the objector to account for the exact circumstances, both as to time and place, of the event being foretold (in general twelve months) before hand, when, from the nature of those events—as, for example, *earthquakes*—no previous intimation of them could have been had; and again, political circumstances, of which the ablest politicians were wholly ignorant. We beseech our readers to look at the dates of the predictions, and compare them with those of the events, and then honestly to tell whether they could possibly have been known, if the influences of the stars were not stern realities. We leave the question with confidence in the hands of honest and intelligent men; and we court the philosophers of the day to show that there is not here given the most decided and satisfactory evidence of the truths of Astrology, and of the vast importance to mankind that such truths should be known and appreciated.

We have arranged the predictions under three distinct heads—Physical Events, Political Events, and Miscellaneous Events:—

PREDICTION OF PHYSICAL EVENTS.

ECLIPSE OF THE MOON, FEB. 26, 1831.—"*Sickness* and destruction to Turkey, and other Eastern nations ruled by Virgo"—viz., Bagdad and Babylonia, the banks of the Tigris, &c.—*Herald of Astrology*, 1831, p. 5.

"An epidemic will now prevail."—June, 1831. "Many fortunes will be made by the medical profession. It will not be a time to 'throw physic to the dogs.'"—July, 1831.

"Saturn, Mars, and Mercury conjoined in the first degrees of Virgo; and the star of day is hastening to join the baleful trio! *Storms, wrecks,* and *violent convulsions* of nature will assuredly follow. This great assemblage of

EVENTS WHICH FOLLOWED.

Bagdad was overflowed by the Tigris; and the desolating plague brought death in the months of March and April upon 50,000 souls! Mr. Kitts, an eye-witness, describes it as "a Sabbath of *destruction!*"

"200 excuses were sent to the Queen's last ball on account of illness."—*Morning Herald*, 6th July, 1831. N.B. An influenza raged in England; and on the Continent the *cholera*.

On the 12th August this fatal conjunction of the Sun and three planets occurred in Virgo. In July, earthquakes in Sicily. A new volcanic island. On 2nd of August, fires in Constantinople; and again, the 30th, many lives

PREDICTIONS.

the heavenly bodies always foreshows direful events. * * Desolation of countries, and ruin of cities, towns, and villages; earthquakes, floods, and mighty tempests. Dreadful will be the result to more than one land."—August, 1831.

"A disease among great cattle will now be prevalent."—August, 1831.

"Another month of change appears. The orphan's sighs, the widow's tears, shall mark its way."—September, 1831.

"*Pestilence*, turbulence, and bloodshed will ravage the land of Islamism. I fear it (Encke's comet) may extend its deadly effects to the city of *Paris*."—May, 1832.

N.B. The comet in Virgo, the ruling sign of *Paris*.

"These aspects in Virgo will spread sufferings through Babylon, Mesopotamia, and all ancient Assyria. The Grand Turk shall weep."—September, 1832.

"Much violence, many sudden deaths—numerous extensive accidents will write 'desolation' in the character of this month."—May, 1833.

EVENTS.

destroyed, and 7,000,000*l.* of property. On the 11th (exactly at the conjunction) a hurricane destroys 5000 lives in the West Indies, Cuba, &c. A storm and flood destroy 50,000*l.* of property in Liverpool. The Rothsay Castle wrecked, and 120 persons drowned; a ship from Plymouth, 370 lives; one from Londonderry, 241 lives, &c. Storm in Killarney, 38 persons killed; and 30 killed by lightning in various parts of England. 16th. Storm and flood at New Orleans—50 ships driven on shore.

"So destructive has been the rot in sheep, that many farmers in Worcestershire have lost their *whole stock*."—*Bell's Life in London*, 11th September, 1831.

In this month the *cholera morbus* first made its fatal appearance in this country.

"Letters from Constantinople of 10th June state that the *plague* had broken out there, and made terrible ravages. This visitation, and the double war in Albania and Egypt," &c.—*Times*, 21st July, 1832. On the 5th of June terrible riots in *Paris*, bloodshed, and tumult. The cholera violent in Paris—there died 1500 per day.

"The *plague* and the *cholera* were both making dreadful ravages in Constantinople and other parts of the Turkish dominions."—*Times*, 12th October, 1832.

Forty-seven persons killed in a coal mine; a policeman killed, and numbers hurt, in the Calthorpe-street riots; a Liverpool coach upset, three persons killed; Dr. Hennis shot at Exeter; fatal duel at Dublin; Lord L. Gower's son killed, and numerous other accidents. On the 18th, in Zolkien, 700 houses and two convents

PREDICTIONS.	EVENTS.
	burned; 26th. 306 houses at Szis-kow; 28th. 44 barns at Grelow; 29th. 100 houses at Hotzenblotz. 28th. Riots in Nieustadt, 100 persons killed.
"The month (April) ends with an *influenza* or epidemic."—April, 1833.	The dreadful extent of this is well known. It is said to have killed more than the cholera.
"In Paris troubles accumulate." —May, 1833.	"The *Gazette Medicale* calculates that four-fifths of the population of Paris (665,000) are at this present moment more or less affected by the influenza."—*Times*, 30th May, 1833.
Naples shakes *politically;* and 'tis likely that its neighbour mountain trembles *physically*. Nor may *India* hope to rest in tranquillity." —May, 1833.	"An officer and six subalterns arrested at Naples for having plotted to assassinate the king."—*Morning Herald*, 26th June, 1833.
	NAPLES, JUNE 1.—For the last few days Mount Vesuvius has been in a very turbulent state. A torrent of lava has come down as far as the middle of the mountain." —*Globe*, 27th June.
	22nd May. Hurricane in India. Several East India ships wrecked, and many *thousand* souls perished in different parts of the country." —*Calcutta John Bull*, 28th May, 1833.
"In Europe generally, and even in North America, it is to be feared that it may cause much sickness in August and September, if it do not even stir up the dying embers of the *cholera morbus*." Eclipse, 2nd July, 1833.	At Antwerp and Rotterdam deaths daily 120 in August. Badajos and Seville ravaged in July and September. London attacked in August, Liverpool in September. *Cholera* Prevention Bill, 28th August. The disease in South America and Mexico, &c., in the autumn to a fearful extent.
"If the planets have caused the present pestilence, there is this consolation for mankind, that it will *not* continue, as is apprehended, a lasting addition to the ills to which flesh is heir. * * * In 1834 the cholera will cease. I believe it will visit Spain, Portugal, and South America; and I am fearful that next autumn (1833) *Old England* will suffer."—Page 47, *Herald* for 1833.	The above list of places and times of the disease appearing, to which may be added Lisbon, fulfils the prediction exactly. And, although some of the first medical men gave it as their opinion that the cholera would continue, the stars contradicted them, and proved correct.

PREDICTIONS.

"India or China shakes to the centre."—October, 1833.

"Some very fatal events fall out in our Indian possessions."—January, 1834.

"The 14th September, 1833, is named as likely to cause 'earthquakes,' and that 'even England shall scarcely escape.'"

The 1st of September is said to threaten "terrible hail-storms, inundations of the sea," &c.

At page 39, *Herald*, it is said, "Serious damage is done to the fruits of the earth by storms and lightning;" and at p. 23, "much mischief to the harvest in Scotland, through turbulent winds," &c.

EVENTS.

"A *horrible famine* is at present raging in India. Mothers have been seen to devour the dead bodies of their own children; and thousands of children have been sold by their parents."—*Liverpool Chronicle*, 30th August, 1834.

Accordingly, on the 18th, within four days of the time named, there was an earthquake at Chichester!

All Europe can bear evidence to the fulfilment of this prediction.

Observe the fulfilment. "Paris, 17th September. The quality of the impending vintage is irretrievably ruined."—*Morning Herald*, 20th September. "The wheat crop has received great and serious injuries. In the northern parts of Scotland the harvest has been impeded by rains and high winds. In Germany the harvest has been obstructed by cold rains and high winds."—*Agricultural Report, Monthly Magazine*, September. "We have received a file of the *Charleston Courier* to the 7th ult. These papers give deplorable accounts of the wheat crops from rust, rain, and storms."—*Liverpool paper*, 13th August. "Accounts from Oxel state that a violent hail-storm had destroyed the crops over an extent of fifty wersts."—*Times*, 12th August. The London papers of the 2nd and 3d Sept. give farther evidence of the truth of the prediction in the effects of the hurricane on the 1st on hops, fruits, &c. Thus America, Russia, Germany, France, and England, felt the effects of planetary influence, and can bear testimony that this was no *vague* prediction, and that it was *fulfilled to the letter*. It was founded on the conjunction of Saturn and Mars in Virgo.

"A great commercial speculation meets with a sudden disaster about the middle of this month. There is great danger of a sudden irruption of water. * * It may be the *bursting of a steam-engine*."—March, 1834.

On the 15th day of March, 1834, the steam-engine of the St. George's Company mine in Cornwall burst, and did great mischief, killing and wounding several persons.

"The opposition of the two evil planets is on the 15th day; and on the 19th the Moon passes Saturn's body, and is opposed by Mars. Let my readers note this period of the month, and they will observe accounts of serious and

"On the 17th an explosion of fire-damp killed three men and four horses, near Blackrod. On the 18th, five men killed in a coal-pit at Raugh Hills. Two youths killed in a mine near Merthyr. An explosion of fire-damp on the

PREDICTIONS.	EVENTS.
extensive accidents, such as the fall of buildings, *explosion of gas in mines*," &c.—May, 1834.	24th, near Oldham, and two men dangerously burnt. One died on Sunday."—*Liv. Mercury*, 30th May, 1834.
"The harvest in France will be very much deteriorated by thunder-storms or lightning."—June, 1834.	"The storm felt in London, Brighton, &c., on the 14th June, extended all over the north of France, and did great mischief to the corn, *which was set fire to by the lightning*."—*Liv. Times*, 1st July.
"Nor will this month of May (1834) go by without something very serious of this kind (earthquakes) being recorded (about the 9th, 16th, and 23d)." This prediction was made from the conjunction of Jupiter and Mercury in the sign Taurus, which took place on the 23d of May, when fearful earthquakes commenced in Asia, Europe, and America. N. B.—The shocks at Santa Martha continued at intervals from the 22nd May to the 26th June; and Saturn moved only six minutes in that period, thus confirming the doctrine of Ptolemy as to the effects of stationary planets.	Violent eruption of Mount Vesuvius on the 22nd of May, 1834. An extensive earthquake at Jerusalem, and a series of violent shocks (when the earth cracked in fissures of six inches in width, and in some places water, hot and sulphureous, was ejected) overthrew the city of Santa Martha, &c., in South America, on that very day! —New York papers, June 25th, 1834.
"The stationary state of Saturn will produce shocks of earthquakes about the 7th, and towards the end of the month."—June, 1834.	"On the 5th of June a severe shock of earthquake was felt in Cephalonia. A great deal of damage, &c. An earthquake was experienced at Guadaloupe, on the 26th of June."—*Liverpool Chron.* 30th Aug. There were also shocks at Ripon, in Yorkshire, on the 28th June, and at Milan on the 3rd of July.
"There are tokens of earthquakes, especially about the 17th of this month."—Sept., 1834.	"The town of Kingston, Jamaica, was visited by eight or ten severe shocks of earthquake on the night of the 7th September."—*Morning Post*, 29th Oct., 1834.
"The numerous aspects, &c., on the night of the 2nd, threaten a shock of some violence to some portion of the earth."—October, 1834.	"A violent shock of an earthquake was felt at Bologna on the evening of the 4th of October."—*Morning Post*, 25th Oct., 1834.

(To be continued.)

ON PLANISPHERES.

Most people who are at all acquainted with Astrology probably know what a Planisphere is—viz., an instrument by which "directions" are measured, instead of calculated. But perhaps many, who know this, have not a very accurate notion of the nature of this instrument, or of the principles on which it is, or ought to be, constructed. Many persons go on calculating directions in the way the books tell them—(not that I mean to say that is the wrong way)—without ever knowing, or troubling themselves to inquire, what a direction really is, or what is the foundation of the rules which they are in the habit of following. An investigation of the principles on which a planisphere is to be constructed will, therefore, I hope, serve another purpose besides that of putting the readers of "The Horoscope" in possession of a method of measuring directions with, of course, much greater ease and rapidity than they can be calculated or measured by any method yet published, and with quite sufficient accuracy; for this investigation will necessarily tend to elucidate the principles on which the whole theory of directions depends—or rather the theories; for there is, unfortunately, more than one.* I shall, however, explain both of them, and give instructions for measuring directions on both systems; so that every body will be able to judge for himself which produces the most correct results. And this is one great advantage of a planisphere: the directions can be measured so quickly, that a great number of experiments can be tried in a short time, and with very little trouble, either for the purpose of rectifying a figure, or testing a system of directing.

As I intend these instructions for the unlearned, as well as the learned, in the art of calculating, I shall make them as simple as I can, at the same time introducing so much of mathematical reasoning as will enable the learned to see how the results are obtainable, and to verify them, if they like.

First, then, what part of the celestial sphere is it that a planisphere represents? That part in which any of the planets are ever found—that is, a space a little wider than the breadth between the tropics. If the planets never had any latitude, or were always in the ecliptic, it would be this breadth exactly; but that is not the case. I shall, however, for the present, consider the necessary contents of the planisphere to be only the space between the tropics, or 47°, very nearly.

Secondly, how is this space to be represented? I say nothing, at present, of the particular lines within that space to be drawn for astrological purposes; but what is to be the mode of representing on a plane this portion of the heavens. A curious and most inconvenient mistake has been made by several, if not all, planispherists on this subject, very strongly illustrating the truth of the trite saying, "A little learning is a dangerous thing." These gentlemen had learnt somewhere the indisputable fact, that no portion of a sphere can be accurately represented on a plane;—that is to say, that some lines on the sphere must be repre-

* See an article by Scrutator, in No. I. of "The Horoscope."

sented by lines of a different length on a plane. But they unfortunately did not know that the two sets of spherical lines, which it happens *can* be accurately represented in length on a plane, are, one great circle, and as many others as they please cutting that one at right angles, such as the equator, and all great circles passing through the poles. And one of these sets—viz., the latter, the declination circles—are just those which they have chosen to curtail; and instead of giving to the distance from the equator to each tropic $23\frac{1}{2}$ equable degrees of the same length as those of the equator, they have given it a space which is measured by the *sine* of 23° 28′, and on which no two degrees are of the same length.

Mathematicians will easily see what it was that led them into this stupid mistake; and it is not worth while explaining it for the sake of others, who may be content to know that it is a mistake, and one which is productive of much inconvenience, though of no actual error in the results, if the various minutiæ are attended to; which are thereby rendered necessary, and which are not necessary, if the proper system is adopted.

The equator and the two tropics are, then, to be delineated by three straight lines, each of 360°* in length, and at a distance of $23\frac{1}{2}$° from each other. The tropics, which are small circles in the sphere, will thus appear of the same length as the equator, which is a great circle. But this cannot be helped;—and, indeed, so far from its being an inconvenience, it is the principal advantage of a planisphere over a globe, that all the measurements, which are made parallel to the equator, are made on the same scale; whereas, on the globe, a degree on the tropics is not so long as a degree on the equator; and it is the *number of degrees* which we always want to ascertain in any arc, and not the proportion which the *length* of that arc bears to that of the corresponding arc on the equator. Indeed, it must be evident that we have nothing to do with actual length at all, as we are measuring, not on the earth the distance between two places, but in the heavens the angular or apparent distances of two planets or other points.

The first thing that we want is evidently a representation of the ecliptic, for nearly all astrological operations have a reference to this circle. I shall proceed at once to give a description of the instrument as it should be constructed for planispheric use.

Now, it is to be remembered that this circle, not cutting the equator at right angles, but at an angle of 23° 28′, cannot be accurately represented on a plane on which the equator appears as a straight line, and *vice versâ*. It will, therefore, be necessary, in order to construct the proper curve, to determine a considerable number of points in it, through which the curve may be traced with sufficient exactness, and the remaining degrees interpolated. Before describing the method of determining those points, I will say something of the instrument itself.

All that is practically necessary is, half the ecliptic and about two signs more; from the beginning of Sagittarius to the end of Cancer, or even to Cancer, 20°, I have found to be quite a sufficient length. Get, therefore, a piece of sheet brass, about 235° long and 57° wide (I allow 10°

* Of course you may assume what length you please for a degree. Less than one-tenth of an inch is not consistent with the attainment of much accuracy, and more than one-eighth will make the planisphere an inconvenient size.

for the lower part of the instrument, besides the necessary 47°, or rather 46° 56′). Let it be well hammered and planished on one side. Make one edge perfectly straight, and at a distance of ten degrees from this edge draw a straight line with a sharp-pointed instrument. At about 33 degrees from the right-hand end of the brass (the straight edge being towards you), make a mark in the line above-mentioned. This point is to be ♈ 0° or ♐ 30°. At the distance of 128 degrees from this point make another mark in the line (this number is taken, because it admits of being continually bisected, the only accurate mode of graduation). Then bisect this distance, and with the compasses mark the distance 64 degrees beyond the 128° point; and then go on bisecting and marking till the whole line is divided into degrees. Then distinguish the tens and fives, and particularly the 90° and 180°, in some way that will enable you to see at once any degree you want. This, in future, is to be the scale from which all your measures are to be taken; so that if your 128° should not have been accurately 128 tenths or eights of an inch, it will not signify.

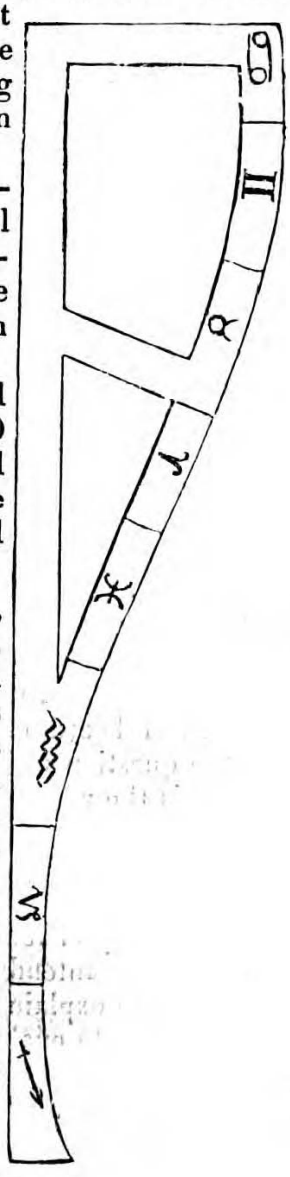
Now, then, beginning from ♈ 0°, mark the distances in the first column of the annexed table. On the right hand of ♈ 0° the first three of these distances must be marked. There will be room for no more of those in the table; and therefore, beyond those three, mark 32° 12′ for the first point of ♐; and beyond ♎ 0°, or 180°, begin again with the same table *backwards*. You will then have got marked the right ascension of every eighth degree of the ecliptic. Next, by means of a common carpenter's square, draw lines across the brass through these points of right ascension at right angles to the above-mentioned line or straight edge. On these lines are to be measured the declinations of the successive 8th degrees of the ecliptic, or rather their distances from the tropic of Capricornus, or the long straight line. These declinations are given in the second column of this table. You will thus have got the place of every 8th degree, from ♐ 0° to about ♎ 20°, accurately marked. If you wish to be very exact, you may, from "Zadkiel's Tables," find every fourth degree in like manner. It is very easy to draw the curve of the ecliptic through all these points, and then, by repeated bisection, to mark every degree.

R.A.	Dec.	Long.
8·43	·15	♈ 8 ♐ 22
17·22	·50	16 14
25·54	2· 8	24 6
34·16	3·44	♒ 2
42·28	5·42	10
50·28	8· 1	18
58·16	10·36	26
65·54	13·25	♓ 4
73·25	16·23	12
80·49	19·30	20
88·10	22·44	28
95·30	25·51	♈ 6
102·53	29·	14
110·20	32· 2	22
117·54	34·57	♉ 0
125·37	37·39	8
133·31	40· 7	16
141·36	42·16	24
149·53	44· 3	♊ 2
158·21	45·26	10 ♎ 20
166·57	46·44	18 12
175·38	46·56	26 4

This last operation, however, need not be performed yet, for all the marks so made would be cut away by the next operation. The next thing to be done, then, is to cut the brass to the shape thus marked out for the curve of the ecliptic. This must be done with great care. You may then proceed to bevel the edge, so as to make it sharp, by which means its intersection with the various lines on the planisphere can be observed more accurately. The edge to be thus bevelled is, of course, the one which lies uppermost on the side which I have just been giving directions for graduating. It is not necessary to graduate the other side

of the brass at all. This bevelled edge being made smooth, by filing and other methods, it is ready for final graduation. This is to be done by extending the lines of declination which are already drawn, and whose ends have been cut away, across the bevelled edge. The ends of those lines will then evidently be the exact places of every eighth degree of the ecliptic; and by three bisections all the intermediate degrees may be inserted. These should be strongly scratched with a hard steel point for about the length of one degree (the breadth to which it is as well to bevel away the edge), the fives and tens extended further, and the separations of the signs further still. All these marks should be made as nearly as possible at right angles to the edge. Lastly, the symbol of each sign should be marked somewhere between its boundaries. These marks may be rendered more visible by heating the brass moderately, and wiping printing ink over it, just as is done over a copper-plate from which an impression is going to be taken; the ink will remain in the marks, and make them permanently black.

I have hitherto considered the ecliptic as a continuous sheet of brass, but it is more convenient to have a part of it cut out, which should be done before the straight edge is made, or any thing else done; for the cutting always distorts the brass a little. It will then appear something of this shape.



I have already spoken of the manner of representing the space between the two tropics. I shall now proceed to explain the best method of practically exhibiting this space in such a way that the ecliptic may be applied to it in the proper position with the least possible trouble.

For this purpose, then, get a board of some hard white wood, well seasoned, a little more than 360 degrees long and 67 degrees and about an inch and a half wide, *i. e.*, twice $23\frac{1}{2}^\circ + 10^\circ + 10^\circ +$ twice $\frac{3}{4}$ inch for the breadth of the two slips which will be mentioned presently.

Get two slips, about $\frac{3}{4}$ inch wide and $\frac{1}{8}$th thick, of some hardwood, glued on the face of the board, with their inside edges perfectly straight and parallel to each other, and leaving 67 degrees between them. The advantage of having *two* slips will be seen afterwards. Glue two similar slips on the other side of the board. One side will then serve entirely for one latitude, as London, and the other for another, as York.

It is plain, then, that a straight line right along the middle of the board, equidistant from each slip, will be the equator, and two other lines, each 10 degrees from one of the slips, will be the two tropics; and that lines at right angles to these across the middle of the board and close to each end, *i.e.* at 180 degrees from the middle cross line, will represent the several portions of the meridian, or the midheaven and its opposition.

The next lines to be drawn are those representing the horizon, or the ascendant and descendant. Now, as yet the board is exactly similar on each side and at each edge. With any edge towards you then, or downwards, mark the letter M at the upper end of the middle transverse line, or meridian; and consequently the letter I (Imum cœli) at the upper end of each of the two other transverse lines on that side of the board. The right hand half of the board will then represent the eastern or ascending portion of the heavens, the left hand the western or descending; this is a consequence of the manner in which the ecliptic is drawn. Now, the ascendant will not be a straight line; we must, therefore, draw it, as we did the ecliptic, by means of several points determined in it; and as it does not differ much from a straight line, a few of these points will be sufficient. For this purpose it is convenient to draw lines at the distance of 8 and 16 degrees from the equator, on each side of it, and at the same time may be drawn two lines at the distance of 28 degrees from it, to take in the extreme latitudes of the planets; these lines should be only scratched or cut, and not inked, as, indeed, may be the equator and tropics also. Also, at the distance of 90 degrees on each side of the midheaven, M, draw a line across the board, perpendicular to the equator. From this line may be measured the ascensional differences of the four several points in the ascendant whose declinations are 8°, 16°, 23° 28′, and 28°. These differences are, for London, respectively 10° 11′, 21° 9′, 33° 7′, 42° 0′. If, therefore, these last-mentioned distances are measured on the lines which were drawn through those degrees of declination, 8°, 16°, &c., in the proper directions, we shall obtain four points in the ascendant and descendant, on each side of the equator, through which any person with a good eye and a steady hand may easily draw the proper curve. It will be seen at once what is the proper direction to measure the ascensional differences in, when it is remembered that the upper ends of both the ascendant and descendant are to be nearest to the midheaven, and consequently their lower ends nearest to the lines marked I. Then mark the upper end of the ascendant E, and that of the descendant W. So far every planisphere must be the same, for the same latitude at least; for we have only as yet represented circles which nave a real astronomical existence. But we must next consider some other curves, which, though of no astronomical importance, are of most essential importance in an astrological view. Every body almost, whether acquainted with any thing else in astrology or not, has heard of the division of the heavens into twelve houses. And the question which now arises is, how this division is to be made? Nor is this the whole of the question; it might not be of much consequence whether a house comprehended a few degrees of the ecliptic too much or too little; but the same error which may cause a house to have half a dozen degrees too many or too few, may also give half a dozen years too many or too few to our calculation of the length of a man's life. I do not here intend to discuss this question of dividing the heavens, but merely to explain the systems between which the question lies, in such a way as to enable any one who will take the trouble to construct a planisphere to compare their results experimentally.

I will begin by explaining how to represent on the planisphere the Placidian *poles*, as they are called, more properly the curves which divide proportionally all the semidiurnal arcs of the planets in any particular latitude. This process is exceedingly simple. Suppose we wish

to insert the poles for every 5 degrees, which will be a sufficient number. We shall then, of course, have eighteen poles drawn between each portion of the horizon and meridian. Now, the equator and the tropics, and those other lines which were drawn through the declinations 8°, 16°, and 28°, are all diurnal and nocturnal arcs. The portions of each of these lines then, which are included between each portion of horizon and meridian, must evidently be divided into eighteen equal parts. We shall then have got the same number of points determined for drawing each *pole* by as we had for drawing the ascendant and descendant. Every *sixth* pole will, of course, be the boundary of a house, and may as well, like the horizon and meridian, be marked with ink, while the intermediate poles are only cut or scratched on the board.

The planisphere is then completed on the Placidian system; and the ecliptic being laid on the board, with the Sun's degree placed the proper distance from the midheaven, the *figure* is at once exhibited by the intersections of the poles of the houses with the ecliptic. I say nothing of measuring directions yet, for the same instructions will do for both systems.

The next question is, how to draw the poles of Regiomontanus, or according to the "rational" method, as it is called? These lines are great circles, and not irregular curves, as the Placidian poles necessarily are, passing through the north and south points of the horizon, or the points where the horizon and meridian intersect. It will be sufficient to draw them through every five degrees of the equator; and in the houses next to the ascendant through every ten degrees. They may very well be drawn on the same board as the Placidian poles; for they will be immediately distinguishable from them, by being more inclined towards the equator, or more oblique than the Placidian; and by having them together, any direction can be measured on both systems immediately, without the trouble of shifting the ecliptic. The different points in the equator, and the other lines parallel to it, must be determined by the following table:—

LATITUDE 51° 32′.					LATITUDE 53° 30′.				
QA	$d=8$	16	23·28	28	$d=8$	16	23·28	28	QA
5			2·42				2·56		5
10			5·28				5·51		10
15		5·22	8· 8			5·45	8·44		15
20		7· 5	10·46			7·37	11·34		20
25		8·46	13·21		4·36	9·26	14·21		25
30	5· 4	10·24	15·52	19·34	5·27	11· 9	17·21	21· 4	30
35	5·50	11·57	18·16		6·15	12·50	19·39		35
40	6·32	13·25	20·34		7· 1	14·25	21·38		40
45	7·11	14·47	22·44	28·14	7·43	15·32	24·30	30·32	45
50	7·47	16· 3	24·44		8·22	17·16	26·42		50
55	8·20	16·47	26·35		8·57	18·30	28·43		55
60	8·49	18·13	28·15	35·31	9·28	19·37	30·33	38·30	60
70	9·34	19·50	30·54		10·17	21·21	33·28		70
80	10· 2	20·50	32·33		10·46	22·26	35· 7		80
E.	10·11	21·10	33· 7	41·55	10·57	22·48	35·55	45.48	E.

The number of degrees and minutes placed opposite to any particular value of QA, and under one of the columns headed with 8, 16, 23½, 28, is the distance along the line belonging to that column of the point sought, from a line perpendicular to the equator, and drawn through that point in the equator which the required pole is to pass through. QA is the distance of this last-mentioned point in the equator from the meridian, either M. C. or I. C. For the poles which are near to the meridian only a few numbers are given, in the lines which are farthest from the equator, because these poles are very nearly straight lines. Any one who wishes to construct more of the poles for smaller intervals than five degrees may do so by means of the following formula :—

$$\text{Sin } a = \tan l \tan d \sin QA ;$$

l being the latitude of the country, d the declination of the point sought (in the above table being either 8°, 16°, 23° 28′, or 28°), and a the number to be inserted in the table.

The planisphere is now completed on the system of Regiomontanus also.

But before we proceed to measure directions, there are two other instruments to be constructed.

The first is a rule, or measure, for measuring the length of arcs of direction, and it simply consists of a thin, flat rule, of brass or steel, with a bevelled edge, graduated on the same scale as the rest of the apparatus, and either 80 or 90 degrees long. The two ends should be square, and the graduations should commence exactly from each end; *i. e.*, not leaving a small space beyond the beginning and the 90th degree. The 10 degrees and 5 degrees should, of course, be marked, and beginning from the left hand, the bevelled edge being towards you.

The next instrument is one for equating arcs to years, and is, I believe, quite new. Either on a narrow strip of parchment, or somewhere on the board or slips of the planisphere, the Sun's daily motion in R. A. is to be represented. It is to be remembered that, as it will sometimes be necessary to measure from December into February, and even March, this instrument, if of parchment, must be above 360 degrees long; and if marked on the planisphere, which is not longer than 360 degrees, it will be necessary to repeat part of it from September to December, and then proceed to March. The best way to make it is this. Draw a straight line, and divide it into degrees of the same length as the rest of the scale. Then, from some table (I do not remember any one except Seed's Ephemeris for 1840), mark the Sun's place in R. A. every day at noon. Mark the 10° and 5°, and mark off the months. Then, for a birth on the 1st of June, for instance, you will have to place the end of the rule on the nearest 10° or 5° to the 1st of June, and you will see in a moment what number of years corresponds to any number of degrees on the rule; in other words, you may "equate any arc to time" by mere inspection.

There are other ways of doing this, by means of the planisphere and almanac together; but this is evidently the most simple and easy, and at the same time accurate, method that can be devised, as it requires nothing but mere inspection.

These are all the instruments that are necessary for measuring directions by means of a planisphere. I will just mention that the board may be made more portable, by being divided across the middle, near to (but not in)

the midheaven, and being made to close up with hinges. A planisphere on the scale of one-eighth of an inch to a degree will then fold up into less than 23 inches. The ecliptic will be about 30 inches long. I shall leave my friends to employ themselves during April in constructing these instruments, and in May they shall have instructions how to use them.

♅

P. S.—In page 92, in the last number, we are referred to "Wilson's Dictionary," page 327, to learn that the ascendant to the conjunction of the Moon causes "lunar diseases," and sometimes "threatens drowning." But, unfortunately, we learn there also that Venus sometimes produces certain misfortunes peculiar to itself, and even Jupiter. Yet Venus and Jupiter are "invariably considered benefic." I will, in return, oblige the Horoscope-reading public with another reference; that is, to Ashmand's Translation of Ptolemy, p. 27: "The Moon is also considered benefic, for the same reasons" as Jupiter and Venus. Yet, to differ from Ptolemy is looked upon by some people as a species of astrological heresy. "The Moon is, I believe, considered invariably benefic," says the planet ♅. "*Certainly not*," says the editor, Horoscope, No. II. p. 53.

[*Note of the Editor.*—Ptolemy does not say that the Moon is "invariably" benefic, and it was this point only we meant to correct.]

ON DIVIDING THE HEAVENS.

TO THE EDITOR OF THE HOROSCOPE.

SIR,—At page 104 I find some remarks on the subject of dividing the heavens, by Mr. Hirst, purporting to be a reply to a paper by Scrutator on the same subject, inserted at page 17 of the HOROSCOPE. I presume, therefore, that I am entitled to say a few words in answer to Mr. Hirst, who has very candidly stated that, "since truth is his only object, he hopes, if there be any error or fallacy" in his remarks, it may be pointed out. Now, Mr. Hirst states, that if the heavens be divided in a CORRECT manner, we shall learn how the Sun ought to rise to the cusp of any house by subtracting the oblique ascension of the cusp of that house under its own pole from the oblique ascension of the Sun under the same pole; and this, he says, "ought to give the same distance as would be found by using the semi-arc of the Sun." Now, let me tell him that this is nothing less than begging the whole question; for he assumes the *Placidian* method to be the *correct* one, and in consequence of this assumption he makes the cusp of the 12th house pass through the trisection of the Sun's semi-arc; and then he proves, by his calculations, that by bringing the Sun up to the trisection of his semi-arc, we also bring him up to the cusp of the 12th house. Now, when we assume the cusp of the 12th house to pass through a particular point (viz., the trisection of the Sun's semi-arc), we may very reasonably expect that the Sun, when he has arrived at that point, will then also be upon the cusp of the 12th house. But let us see how far this expectation will be realised in the case of any other planet which has

very large latitude. For instance, suppose Venus to be in 9° 55′ ♌, with 6° 51′ south latitude, and 11° 10′ north declination (the position she occupied in the heavens on the 1st of August, 1812, at 5h. 10m. A. M.), her right ascension will then be 130° 30′, and her distance from the midheaven of the figure selected by Mr. Hirst will be 135° 28′, and her semi-arc 105° 39′; consequently (using the semi-arc of Venus) we have—

Meridian distance ♀	=	135° 28′
⅔ semi-arc of ♀	=	70 26
∴ distance of ♀ from 12th	=	65 2

Again, using the pole of the 12th, as instructed by Mr. Hirst, we have

Asc. diff. ♀ (pole 12th)	=	10° 36′
Right ascension of ♀	=	130 30
∴ oblique asc. of ♀ under pole of 12th	=	119 54
Oblique asc. of 12th	=	55 2
∴ distance of ♀ from the 12th	=	64 52

Thus we see that there is in this particular case a difference of 10′ between the two methods of directing—a difference which will, I presume, create some little surprise in the mind of Mr. Hirst, when he remembers that I have assumed that the cusp of the 12th house passes through the trisection of the semi-arc of Venus. When he reflects, however, that the boundary of the 12th house, on the Placidian theory, is not an *arc of a great circle* of the sphere, but a very irregular curve, the above difference of 10′ will be very easily accounted for by the fact that this said irregular curve cannot have (properly speaking) any such thing as a pole, unless we give to the term "pole" a meaning very different to that we have been accustomed to give it. For these reasons, I think Mr. Hirst's *calculations* "do not prove the truth of the Placidian method, and the error of that of Regiomontanus." But Mr. Hirst refers me to the "Defectio Geniturarum" of Partridge, and to Wilson's Dictionary, where he says I shall find the subject ably examined, and the fallacy of the "rational way" (that of Regiomontanus) shown. Now, as it is just possible he may not mean to give me this reference by way of a joke, I will give the reader the substance of the *assertions* of those learned authors; for they certainly have not given us any reasoning upon the point.

The argument, then, by which the authors aforesaid have *proved* the method of Regiomontanus to be incorrect is in substance as follows:— They erect a figure upon each system, taking the same midheaven in both; and when they find that the cusp of the 11th and 12th houses in the two figures differ from each other, they at once conclude that the method of Regiomontanus *must be incorrect.* And why? Guess, reader, if you can. It is simply for this, and for no other reason—viz., that it does not agree with the Placidian method, which, throughout the whole of their argument, they *assume* to be correct. The fallacy of such a line of argument is so obvious, that I shall pass it over without a single remark. And thus, I hope, I have fully disposed of all Mr. Hirst's

objections to the method of Regiomontanus. Before quitting the subject, however, I will mention one fact, which appears to militate strongly in favour of the correctness of that method. It will not be disputed, I believe, that the horizon of any place is a semicircle; and if so, wherever a planet is situated, it must be on the horizon of some place or other; and consequently, its pole will be the same as that of the place—or, in other words, its curve of position, like that of the horizon, will be a semicircle, as it is in the method of Regiomontanus, and not that irregular curve which it would be on the system of Placidius.

SCRUTATOR.

ASTROLOGY OVERTHROWS SOCIALISM.

(Continued from page 68.)

The arguments used against Fourier and his fallacious principle of man being born with a propensity to *good* only will apply almost equally to the very mistaken principles of Owenism; for we may absolutely prove by astrological experience that men are *born* with various mental predispositions or propensities. And the same "circumstances" acting on different mental qualities will be attended with very different effects. Thus, two brothers, who may be educated in the same house, and under exactly similar circumstances, will turn out extremely different in their tastes, habits, and characters. They may be born, we say, and nurtured, instructed and educated, under exactly similar "circumstances," as regards society, and yet those "circumstances" shall fail to produce sameness, or even similarity, in the two individuals. All will admit that their *persons* may be different—which, we contend, will be found to depend upon the signs of the zodiac ascending, and other circumstances, at their respective births; and if they be born with the same sign ascending (as is generally the case with twins), they will differ but slightly in their personal appearance; whereas, if they be born with inconjunct signs ascending (as, one with Cancer and the other with Leo) they will be of extremely different personal form, &c. Now, we hold that this same principle applies equally with regard to their mental characters; for "the different qualities of the signs containing Mercury and the Moon are well competent to contribute towards the properties of the mind."

This, of course, is wholly a question of facts and experience; but Robert Owen cannot here say that "facts are yet unknown" to decide the point; for these facts were already known in the days of Claudius Ptolemy, who declares that bicorporeal signs render the mind inclined to "duplicity," whereas fixed signs make the mind "just and uncompromising." Here, then, we join issue with the "creatures of circumstances," as we may term the Owenites; and when they can show us a single case in which the rules for judging the mind given by Ptolemy are not borne out in nature, we shall be ready to attribute some wisdom to their founder. In the mean time, we commend to their perusal this Address (by a Clergyman) to

"ROBERT OWEN.

"You profess to teach 'truth without mystery, mixture of error, or the fear of man.' But this is merely a profession, and recoils like a blunted arrow from the breast of intelligence. I allow that you teach many particular truths; but *the truth* you know not. Your characteristic doctrine of the influence of *external* circumstances contains one important truth, which the old world has despised. It is the sum and substance of your system—'Man is the creature of circumstances.' It is your *first fact*, but it is not a first principle, for it makes man the creature of things which themselves are creatures, and directs the mind to no organic principle of creation. Being your *first* fact, therefore, and the beginning of your system, your system is *without* an organic principle, unless that organic principle be yourself. Now, it is yourself; for, according to your own doctrine, the creators of men, the old circumstances, have not created them *well.* You propose to create *new* circumstances, which will create men better. You, yourself, therefore, are the God of your own system, and above yourself there is no organic power acknowledged. 'Your external or internal cause of all existencies—the all-pervading cause of motion and change in the universe,' is too vague and absurd a thing to be called a God. It is a species of steam-power; and, as you admit of no special plan or design in the divine construction and direction of human society and human affairs, it is evident that *you yourself* are the organic principle, the God of the New Moral World. Moreover, you are the 'creature of circumstances,' and therefore the organic principle of Owenism is itself *a creature;* and there is no uncreated organic principle in your philosophy. Your system, therefore, is a negative system; a system without a principle, a circle without a centre; a system which can satisfy no rational mind; a system which is based upon chaos, *i. e., circumstances;* a system which is based upon mystery and absurdity—namely, an 'all-pervading cause of motion and change,' respecting whom 'facts are yet unknown to define what he is!' Was there ever such incoherent nonsense palmed upon the world for philosophy? Men must be sadly at a loss for 'truth without mystery' when they adopt such a creed.

"But let us analyse this perfect system of truth without mystery. On the one hand, you inform us you know what *truth* is—you teach it. On the other hand, you tell us you do not know what *God* is. 'Facts are yet unknown,' yet 'God is truth.' What did you imagine God was? 'God is truth, God is love, God is light.' You know not God! therefore you know neither truth, nor love, nor light; and yet you pretend to teach men. What *can* you teach them? Is there any thing but the laws of God to teach? And if you know the laws of God, you know himself. But you know *not* the laws of God, because your system is a chaos, and can have no laws. Your God is merely a brute power; and a power without intelligence is a mystery which neither you nor any one else can conceive or define in logical terms. We have no experience of an *unconscious* power. Every man experiences a conscious power in himself; but an unconscious power is merely an atheistical *hypothesis* not founded on experience. Experience makes us acquainted with *conscious* power, but not with *unconscious*

power. Your doctrine, therefore, is not founded on *fact*. It is a mere hypothesis, which experience repels.

"Experience not only teaches us that power originates in consciousness, but it also teaches us that the universal power of Nature must be either infinitely wise or infinitely stupid. You are not sure which; therefore you are not sure whether the laws of nature be the laws of an infinitely wise or an infinitely stupid being. You are not sure whether you yourself are the creature of an intelligent or a brute power; and therefore, to err on *the safe side*, you incline to the latter. Nonsense is the surest, the most probable of the two, in your fact-worshipping mind. But it is all a mystery to you: 'facts are yet unknown.' Facts unknown to determine whether the Creator be wisdom or intelligence! Was there ever such irrationality? It is the bottomless abyss of absurdity!—the hell of the mind!—the pit in which there is no light, and not a drop of living water to cool the parched tongue of the spirit!

"Here is a great, a *primary* truth, which your mind rejects, or cannot *rationally* assert, and you accuse men of *irrationality* for rejecting your inferior secondary truths. Is there any one of your facts more obvious than this, that the laws of nature are the standard of wisdom, and that the universal power is wisdom itself, and ruleth over all in conscious intelligence. Who, then, is irrational, you or the world that disowns you? You have long accused *all* other men of irrationality, and *pitied* them for their ignorance; yet here is one of the plainest axioms of logic of which you are doubtful. Are you not treated according to your deserts? The world would be irrational, indeed, if it received as a teacher a man who could not perceive the very elementary axiom of universal truth. Atheism is essentially irrational. Even doubt is irrational: scepticism is irrational upon such a subject. The wisdom of God is the positive pole of philosophy, and every idea but itself is a negative. The man, therefore, who even doubts it, is incapable of reasoning upon a universal subject, for there is no universal subject but itself. Every thing else but God is a fraction of being; and the atheist is a fractional philosopher, a son of confusion, whose home is the whirlwind.

"You sometimes talk of necessity as the great power; and here, again, your logic fails you. Necessity must, of necessity, be threefold: physical, intellectual, and moral, in unity. Intellectual necessity is wisdom. You might as well use wisdom as necessity, only necessity is a name which gives an idea of *universal death*, and that has irresistible charms for your philosophy. Necessity also gives the idea of an *ignorant* power, and that is the height of your philosophical sublimity. You talk of truth and knowledge as useful in the New Moral World, and declare that it is in harmony with all known facts to maintain this truth, yet you are not sure that truth, and knowledge, and wisdom, are useful or necessary for governing the universe. A little contemptible Owenian community requires knowledge and wisdom to direct it; but the magnificent empire and creations of the Eternal can be ruled and directed by infinite and eternal ignorance! Ignorance, according to your philosophy, is superior to wisdom. Wisdom is only necessary for ruling and directing the little things of time. But ignorance—glorious and sublime ignorance—rules the great things of eternity! The *dark*

ages asserted that ignorance was the mother of devotion. Robert Owen's *light age* raises it a step higher, and enthrones it on the seat of universal empire as the Father of the universe."

(To be continued.)

ASTRONOMY.—No. III.

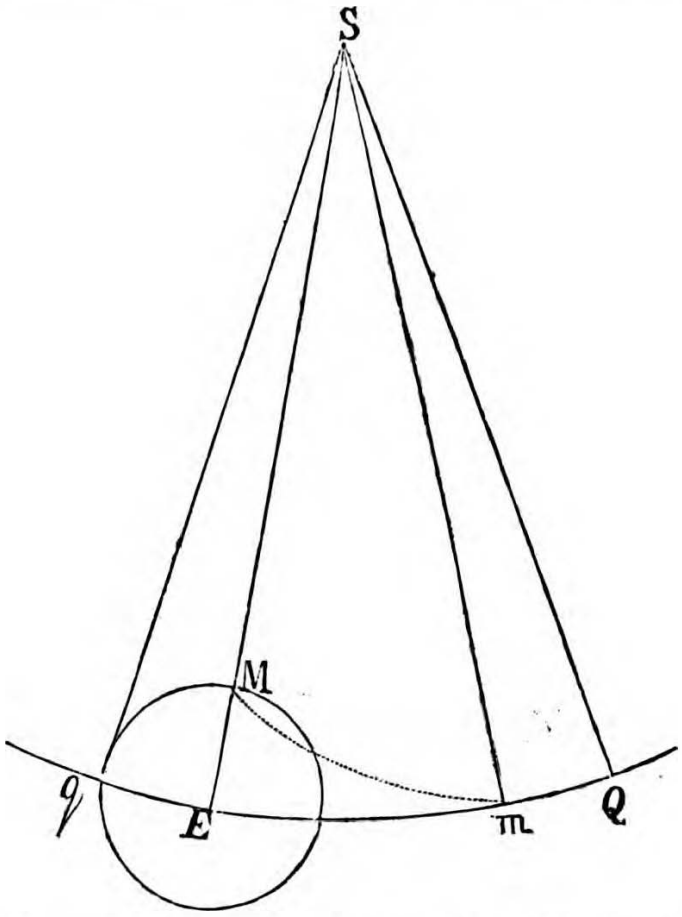
THE MOON.—There is a small body seen also to accompany the Earth, and which, when viewed from the Sun, presents no appearance but that of a regular progressive motion forward in the Zodiac, in the order of the signs, its mean velocity being also that of the Earth, 68,000 miles per hour. During part of her course she is seen inside the Earth's course, or between us, here in the Sun, and the Earth itself; and at this time the Earthites say they have *new* moon. Again, at the end of nearly fifteen rotations of the Earth on its axis the Moon is seen outside of the Earth, being then to the Earthites *full* moon. The whole illuminated disc or face of the Moon is at that time exposed to the Earth; and the Moon is then 237,000 miles farther from the Sun than is the Earth; and she is double that distance farther from the Sun (474,000, or nearly half a million of miles) than she is at the period of new moon. The mean period between one new moon and another is 29·53 days; but it often differs several hours from this extent. When the Moon has passed the full (where she is at her *maximum* distance from the Sun), she begins to *approach* the Sun; and although this approach is very slow at first, it becomes very swift when she has reached the orbit of the Earth, or that line where she is at the same distance as the Earth; yet her *mean* motion *towards* the solar body is, per day, in fact $\frac{474{,}000}{29{\cdot}53} =$ 16,051 miles, which is 669 miles per hour. And when the Moon has again reached the *minimum* of her solar distance (at new moon), she begins to *recede* from the Sun exactly at the same rate. Although both Earth and Moon are seen to fly round the Sun together, they are constantly varying their relative positions. Sometimes the Earth precedes, and sometimes the Moon goes first. If we watch the Moon after the period of new moon, we shall see her in about $7\frac{1}{3}$ days (strictly $\frac{29{\cdot}53}{4} = 7{\cdot}3825$ days) *behind* the Earth 237,000 miles, or about thirty times the diameter of the Earth,—that being the mean distance of these bodies from each other. From this period after the new moon, when the moon forms the *first quarter*, being, when seen from the Earth, 90° from the Sun, until the *last quarter*, when the Moon is *in advance* of the Earth 237,000 miles, the Moon moves faster than the Earth. And from the last quarter, again, until the first, the Moon moves *slower* than the Earth. In the first case the moon travels $237{,}000 \times 2 = 474{,}000$ miles *more* than the Earth in the period between the two quarters; which, being the same as between new and full moon, about $14\frac{1}{4}$ days (strictly $\frac{29{\cdot}53}{2}$ days $= 14{\cdot}765$ days $=$ 14 days, 18h. 21m. 36sec.), the average hourly motion of the Moon beyond that of the Earth is 669

miles, the same as that of her *approach* to the Sun from full to new, and that of her *recession* from the Sun from new to full moon. In the same way, the Moon moves at the same rate *slower* than the Earth from the period of the last quarter until the first. Thus it will be seen that while the Moon is *outside* of the Earth's orbit, or *farther* from the Sun than is the Earth, she moves *faster* than the Earth; and, *vice versa*, while the Moon is *inside* the Earth's orbit, or *nearer* to the Sun than is the Earth, she moves *slower* than the Earth. At new moon the motion of the Moon is about 2000 miles per hour slower than that of the Earth, but at full moon it is about 2000 miles swifter; wherefore the Moon moves through space above 4000 miles per hour swifter at the full than at the new moon.

The curve formed by the Earth round the Sun is nearly a perfect ellipse, but the curve formed by the Moon round the Sun is of an undulating elliptic form; being, in fact, a serpentine curved line, but at all periods concave to the Sun. The mean distance of the Moon from the Earth being $\frac{1}{400}$ of the mean distance of the Earth from the Sun, if the Earth's path round the Sun be represented on paper by a circle 80 inches in diameter, the Moon's relative course will be seen to serpentine round the Sun by always keeping her at a distance of *one-tenth* of an inch from the Earth. A single month's motion will convey a very good idea of this course, by drawing a curve (the radius of which is 40 inches) about $20\frac{2}{3}$ inches in length, and dividing it into 29·53 parts, to let each division represent one day's motion of the Earth (which should be marked by dots 7-10ths of an inch apart); and then, beginning on the right hand, set off the Moon's place at new moon by a dot 1-10th of an inch *inside* the Earth's first place on the curve, and on the 7th day 1-10th of an inch *behind* the Earth; on the 15th day 1-10th of an inch *outside* the Earth; and on the 22nd day 1-10th of an inch *in advance* of the Earth. The relative places of the Moon each intervening day will easily be found, and a curve drawn from one to the other, all through the lunation of 29·53 days, will present a very beautifully curved serpentine line.

The only work we have ever met with which enters fairly into this subject of the true motion of the Moon is by Graham Hutchison, entitled, "Essays on Unexplained Phenomena;" but the writer falls into the stupid error common to most books on Astronomy, of speaking of "the Moon's orbit round the Earth," which involves the absurdity of a body moving in two opposite directions at the same time. For if the reader refer to the figure, and conceive the line $E\,S$ to represent the radius vector, or line which joins the centres of the Sun and Earth, then may $E\,Q$ show a portion of the Earth's orbit traversed in $7\frac{1}{3}$ days. Now, let M show the place of the Moon at *new* moon, and E that of the Earth; and as, after new moon, the Moon appears to the left or east of the Sun, she must, if she move round the Earth, be seen at the first quarter at q, and must have moved from M to q. But though this would be the case if the Earth remained at rest, the Earth's motion alters the case entirely. The Earth, in $7\frac{1}{3}$ days (or 176 hours), will have reached Q, and, as it travels 68,000 miles per hour, will be just 11,968,000 miles removed from E; and if the Moon had really moved from M to q, since $q\,E = M\,E = 237{,}000$ miles, then would she be

left behind and *separated* from the Earth to the extent of $E\,Q + q\,E$,



or 11,968,000 + 237,000 = 12,205,000 miles. But the Moon never is so separated from the Earth, always remaining about 237,000 miles off only. Therefore, when the Earth has reached Q, the Moon *must* have arrived at m, since $m\,Q$ = 237,000 miles; and it follows that the real motion of the Moon is *not* from M to q—that is, a portion of the *supposed* orbit round E—but is really the dotted line from M to m, which is in an opposite direction. It is shown, then, that the angle formed by the Moon M is not $E\,S\,q$, but is the angle on the other side of the line $S\,E$—that is, $E\,S\,m$. Whence it is also shown THAT THE MOON DOES NOT MOVE ROUND THE EARTH.

No argument is required to prove a self-evident proposition; and it certainly is self-evident that it is physically impossible for a body to move in the two opposite directions of $M\,q$ and $M\,m$ at the same time; and so is it physically impossible for the Moon to move round the Earth from east to west at the same time that she moves round the Sun in the opposite direction, or from west to east, as do all heavenly bodies. The fact is, that the Moon *appears* so to move round the Earth from east to west, because the observer on the Earth is not conscious of his own motion through space while observing the Moon. This result of the *apparent* motion of the Moon is an optical delusion, exactly similar to that which makes the objects on shore seem to recede when viewed from a vessel sailing down a river.

As regards the true cause of the Moon being alternately attracted to and repelled from the Sun, as we have shown, there seems a striking analogy therein with the action of an electrified body upon a pith ball, which it alternately attracts and repels. And if the action of electricity in the Sun do produce this motion in the Moon, we may conclude that when she is inside the Earth's orbit, her *atmosphere of electricity* will be greater in proportion than that of the Earth, and that it will be *greatest* at *new* moon. This would account (on the hypothesis of a resisting ether in space) for the Moon being retarded in her motion, as we have shown, from the last to the first quarter, and for the retardation being at a maximum at the new moon, when she moves 2000 miles an hour slower than her mean motion. And equally would her *atmosphere of electricity* be relatively less than that of the Earth when she is beyond its orbit, or from the first to the last quarter, and least of all at the full. Of course, being a smaller body, she would move swifter through space (on the hypothesis of the resisting medium), and would have her maximum acceleration at the full moon, when she really does move 2000 miles an hour beyond the mean motion. We throw out this hint for the consideration of those philosophers who may conceive it more consistent with philosophy to adopt fewer and more simple causes to account for the facts in nature than it is to adopt those which are complex and mysterious, as are those of *gravity* and *attraction.*

TABLE OF THE MOON'S ELEMENTS.

Mean distance from the Earth	237,000 miles
Mean sidereal revolution	27·3217 days
Mean synodical ditto	29·53 ,,
Mean revolution of the nodes, or points in which the Moon is in the plane of the ecliptic	6793·391 ,,
Mean revolution of apogee	3232·575 ,,
Mass, that of the Earth being 1	0·0125172 ,,
Diameter, in miles	2160
Mean hourly motion through space	68,000 miles
Ditto at new moon	66,000 ,,
Ditto at full moon	70,000 ,,
Hourly motion to the Sun at last quarter	2000 ,,
Ditto *from* the Sun at first quarter	2000 ,,

MARS.—If we look farther out from the Sun again, we may behold a *fourth* planet, which is small, but which, from its dark red colour, is remarkable. This is called MARS. It revolves round the Sun in 687 days, or one month less than two years. So that Earth goes round us, here in the Sun, very nearly *twice* while Mars goes *once*. Mars is distant 145 millions of miles from the Sun, or just four times as far off as Mercury, and about half as far again as the Earth.

The diameter of Mars is but 4100 miles, not much beyond the half of those of Venus and the Earth. Mars rotates on his axis, having a regular day and night, once in twenty-four hours and thirty-nine minutes. His axis is also askant from the perpendicular about one-third, or rather twenty-eight degrees. His orbit runs nearly parallel with that

of the Earth, which latter the astronomers call the *ecliptic*, because when eclipses occur, the Sun and Moon are seen from the Earth in that line; which we shall explain when we come to treat on *apparent motions*, or things which appear to the people on the Earth, and which are very different from those *real motions* which are seen only from the Sun, where we are now supposing ourselves.

The orbit of Mars is much more eccentric than that of his neighbour, Earth, as he is at times removed from the true circle about *one part in eleven*. His mean distance from the Sun being 145 millions of miles, he is, therefore, at times, thirteen and a half millions nearer or farther than that distance. His hourly motion amounts to 55,000 miles.

If we adopt the old idea, that Mars receives light and heat from the Sun only according to his distance, we should conclude that the light and heat of Mars, compared with those of the Earth, are only as 43 to 100; so that when the thermometer stands at 100 on the equator of the Earth, if Mars be in the same position as regards the Sun, the thermometer on *his* equator would stand only at 43 degrees. This is calculating that solar light and heat act as terrestrial light and heat do, according to the squares of the distances. But we know, as we have mentioned, that they differ in many important points; and there is one remarkable fact observed, connected with Mars, which quite overthrows this supposition.

At each polar extremity of Mars there is observed a large white spot or patch, which, from its being largest just after the winter of either pole, and from its *melting* away and disappearing according as the Sun's rays fall thereon, Sir John Herschel very reasonably concludes to consist of *ice and snow*. But, as when the heat at the north pole of the Earth reaches 76 degrees, summer heat (and there is no reason to believe it ever does so), the thermometer at the pole of Mars ought to stand at 32 degrees, the freezing point, it becomes evident that the snow and ice would not melt at that temperature. Yet, as they *do* melt, and that very rapidly, we are forced to the conclusion that solar heat upon the planet Mars acts, *not* according to the square of the distance, but according to the angle under which the Sun's rays fall upon any portion of the planet.

About the equator of Mars we perceive numerous clouds floating, which at times conceal the outline of his seas and continents. These, when seen, are observed to be, the former of a greenish hue, and the latter of a *red*, ochrey tinge, which accounts for the planet looking so red to the naked eye.

From all these devices for the convenience of his inhabitants, we submit that they were not devised in vain, and that such beings do really exist. This will appear, indeed, as almost *certain*, if we remember that, if there be one feature more remarkable than another, on the neighbour planet Earth, it is the wonderful extent of *life* therein. Every portion of that planet, water, land, and air, teems with vitality; scarce a drop of water exists there but is replete with myriads of animalculæ, the air is full of insects and flying creatures, the earth abounds with thousands upon thousands of animals; all of which become an unceasing and worthy object for the bounteous wisdom and benevolent

Providence of their great Creator! Shall we, then, dream for a moment that all is dead, and still, and barren, in another such earth, because it is a little farther from the Sun? To do so seems to be paying a very poor compliment to the wisdom which framed that beautiful body.

PHRENOLOGY ADVERSE TO MATERIALISM.

"Courage to think is infinitely more rare than courage to act; but in the former case it is only imaginary, in the latter real."

In our preface to the first number of "Teh Horoscope" we made known our intention to advocate the science of Phrenology, deeply sensible of its invaluable principles and invincible tendencies to promote the improvement and ameliorate the condition of the human species; and also its adaptation to the purposes of the naturalist, in his investigation into the whole range of the animal kingdom. But as it is probable many of our readers may have but a very feeble knowledge of its true principles, and are therefore in danger of being deterred from prosecuting it as a science, from the alleged charge made against it, that Phrenology establishes Materialism, we have felt it to be our duty to examine this objection, *though briefly*, as it is far from our purpose to advocate any science at variance with the fundamental principles of Christianity; and as our opponents have been defeated upon a hundred other objections, and even this also, it may be considered by some a waste of time to renew the subject. But, as phrenologists, we are fully aware of the fact, that no scruples or prejudices are so deeply rooted in the mind as those which arise out of religious training; and that not unfrequently a most useful and active *causality* is powerfully kept in check by a morbid *veneration* and *marvellousness*. This is strikingly the fact with absolute Antinomians, who test every thing by implicit credence on the one hand, and maintain the most incongruous mystifications on the other. It may also be remarked, that the unexpected conversions of many of its most inveterate opponents, is the best proof of the fallacy of such insinuation; and that they have become convinced that the assertion of certain physical facts cannot, if unfounded, logically lead to any result, except the disgrace and mortification of its supporters. On such a supposition, it cannot overturn *religion* or any other *truth*; because, by the *constitution* of the human intellect, *error* constantly tends to resolve itself into *nothing*, while *truth*, having a real existence, *remains permanent and impregnable*. In this view, then, the objection, that Phrenology leads to Materialism, is absurd. If, on the other hand, the science is held to be a *true interpretation of nature*, and if it be urged that, nevertheless, it leads fairly and logically to Materialism, then the folly of the objection is equally glaring; for it resolves itself into this —that Materialism is the constitution of nature, and that Phrenology is dangerous, because it makes this constitution known. We have not space to analyse the various points of view in which the system may be regarded, whether *true* or *false*, but unhesitatingly affirm that it needs no great labour of investigation, and only a small degree of appicatio

of its principles, to convince any calm and unprejudiced mind that the objection of Materialism is futile and unphilosophical. And we must regret that it should have been brought forward in the name of religion, because every imbecile and unfounded attack on philosophy made in this sacred name tends to diminish the respect with which it ought always to be invested; and it is equally lamentable, that those who have assumed to themselves the right to lead the public mind, and to lay down principles which they expect others to adopt, as the only orthodox modes or tests for determining important truths in science or religion, have almost invariably arrogated to themselves a most fatal and despotic dictatorship, and have furnished most *unfeeling*, most *unchristian*, and most *unphilosophical* proofs of *base* and *selfish tyranny;* and have also dealt out with lavish profuseness their anathemas on those who may have dared to question or to doubt *their inexplicable metaphysics.* In consequence, error has succeeded error, and, in the absence of reflection, feelings have strengthened the purposes of selfishness and prejudice, to the injury of the real and imperishable constitution of the mind of man, which we assert, notwithstanding the opinions of men concerning the cause of its phenomena, cannot have the least influence over that cause itself. Such opposition to the real and true philosophy of mind is capable, not only of retarding it, but of doing great violence and much mischief. It is not our business to prove whether *mind* be constituted of matter or spirit, as the effect of our opinion, let it be observed, could not alter the nature of that substance, whatever it is; but this we boldly affirm, that mind, with all its faculties and functions, has existed since the creation, and will exist till the human race becomes extinct; that it is invested in nature with all its properties and essences; and these it will possess, and manifest, and maintain, let men think, and speak, and write what they will concerning its substance. We believe the Creator has invested it with the quality of endless existence, and destined it to flourish in immortal youth, when all material and external relations have suffered decay; and that no opinions can undermine the constitution of mind, or its relations to time or eternity, on which, as their foundations, morality and religion must and do rest, as on an immutable basis. Innumerable observations have proved that faculties and organs of benevolence, hope, veneration, justice, and reflection do exist, and therefore a belief that the mind will die with the body could not pluck one of these sentiments and powers from the soul; neither will our believing the mind to be immortal implant a single one or more of them in our constitution. The mind, then, must remain the same in functions and constitution, let men either believe it to be made of dust, or to be an immediate emanation from the Deity himself. Away, then, with this trivial, vain, and uninteresting objection—this selfish and contemptible cant and unfounded clamour, so detrimental to the interests of morality and religion, and so truly unphilosophical, that no manly intellect can bow to its prejudice.

It is enough to know that the brain is the best constituted substance as a medium, for the purposes through which to manifest itself, and to discover the objects of divine wisdom in selecting it for the purpose, and endowing it with suitable properties to that end: as certainly as he has infused light and heat into the Sun, and impressed different motions

and magnitudes on the planets and stars, establishing a corresponding beauty and harmony which invincibly pervades every portion of the material world. Do, then, these objectors expect from us that we are to exhibit clearly to their view the pure and perfect element which constitutes the human soul? and because this power is denied to our mental and external senses, do they mean to insinuate that the best evidence of the divine intention, in creating the human soul, is to be found by discovering the substance of which it is made? If so, we are not disposed to favour them with such an attempt, or to lay the foundation of such an atheistical principle, but at once assert our conviction that it is constituted of the most perfect, pure, refined, and dignified material, and intended for the noblest and most magnificent destinies, and perfectly suited to the objects of its creation.

"The world is actually arranged on the principle of favouring virtue and punishing vice, and is throughout its constitution framed in admirable adaptation to the faculties of man, as a moral, intelligent, and religious being."—Coombe.

We shall conclude this article with an extract from an eminent and popular divine of the day, strictly in accordance with the principles of Phrenology:—

"I have found the greatest benefit from the science. As a minister of the gospel, I have been led to study the evidences of Christianity anew in connexion with Phrenology, and I feel my confidence in the truth of our holy religion increased by this new examination. I have examined the doctrines of our Church, also, one by one, in connexion with Phrenology, and have found the most wonderful harmony subsisting between them. And in dealing with my people, in the ordinary duties of my calling, the practical benefit I have derived from Phrenology is inestimable."—D. Welsh, D.D., Professor of Church History in the University of Edinburgh.

METEOROLOGY, EARTHQUAKES, &c.,

IN CONNEXION WITH THE CURVES OF THE BAROMETER AND WEATHER IN ENGLAND. SUN IN AQUARIUS, 1841.

During the night of January 23d the barometer suddenly sank about three-tenths of an inch all over England, and rose five-tenths on the following day. This sudden fall was probably the result of an earthquake, a shock of which was felt in Hereford and Wales. A writer from Hereford observes, "On Sunday morning, January 24th, 1841, I was awake, and had observed that the weather was calm. It was about, or within a few minutes of, three o'clock, when I distinctly felt an undulatory motion of the house, which shook the bed, and lasted about three seconds. I heard no noise. The wind was still, about the north-west quarter. In about half an hour the wind freshened, and was accompanied with a considerable fall of snow. I must here mention, that at the same hour a very smart shock was experienced at Caermarthen, in South Wales."

At Thwaite, in the east of England, a similar fall and rise took place

in the barometer as was experienced at Hereford, in the west of England, and heavy snow-storms and hard frost followed. At Thetford the barometer fluctuated as at the above places, and was followed by snow the whole of the 24th. At Wycombe, Bucks, the 24th was cloudy and squally. At Yarm there were snow, hail, and wind. At Knutsford, in Cheshire, snow, rain, and wind. In London the morning was fine, but there was a violent hail-storm, with a powerful gust of wind about noon, and lasted ten minutes.

During the whole of the period, Sun in Aquarius, there has been a great uniformity of severe weather throughout England, which has been manifested by the numerous and similar diseases made known to us by medical men. Among children, in all grades of society, *scarletina*, both in its simple and more malignant forms, has been very prevalent, and in some cases fatal. *Sore throats, fevers*, and *influenza* have been general among all classes. *Acute and chronic rheumatisms* have been very prevalent among the labouring poor. Schools and public establishments have suffered considerably with scarletina and scarlet fever.

N.B.—The fall of the barometer all over England was remarkable from the 2nd of February, when the Sun aspected Saturn, and such numerous other aspects occurred, until the 17th, being a steady *mean* fall of 1·15 inch. A slight rise on the 9th only, when the Sun aspected Venus, broke this peculiar fall, as seen in the curves. It will be observed that the fall began on the Moon passing the northern tropic, was interrupted on her crossing the equator on the 9th, and ceased on her reaching the southern tropic on the 16th day. But though these *changes* invariably happen on the Moon reaching these points, they agree in character with the nearest solar or (if powerful) mutual aspect. Whence we see that the mercury *rose* on the 17th February, because the Sun formed a quintile with Jupiter that day. At Dundee the fall in the fortnight was 1·7 inch; at Gosport, 1·3 inch.

WEATHER AND OTHER PHENOMENA IN APRIL.

Fair at first. Changes on the 2nd; clouds, showers, foggy air. 3d and 4th, cold, easterly winds, nights frosty. 6th, fairer, warmer. 7th, warm weather begins, white clouds, and showers. 8th, hail showers, turbulent air, squalls. 9th to 11th, hot for the season—vegetation rapid, a tendency to drought. 12th, cooler. 13th and 14th, hot, thunder-showers, electric meteors. 16th to 18th, much heat, hail and thunder—changes frequent, misty air; violent thunder-storms on the latter day, and mischief by lightning and hail. 19th, a change—cooler, wind and rain. 20th, stormy. 21st, cool, misty, showers. 22nd and 23d, rainy, unsettled. 24th, fairer. 25th, growing weather. 27th, showers. 28th, raw and chilly. 29th, milder. 30th, showery, cloudy, hail.

N.B.—The Sun in opposition to Mars on the 18th will cause severe storms, in France, England, Germany, Naples, &c.; and we foresee *earthquakes* this month (especially about the 18th and 20th) in several places. Vesuvius will be disturbed, and shocks will occur in Calabria (very likely at *Gaeta)*, Dalmatia, the Morea and parts adjacent.

MUTUAL AND LUNAR ASPECTS, &c., APRIL, 1841.

1st Day.

☽	SQ	♅	1 17	A.M.
•	SQ	☿	4 59	
•	△	☉	9 45	
•	SQ	♄	8 48	P.M.
•	△	♃	11 57	

2nd Day.

☽	□	♀	8 9	A.M.
•	SQ	☉	1 16	P.M.
•	P	♂	4 45	
♂	⚹	♄	8 28	
☽	⚹	♂	10 25	
•	△	♄	10 26	

3rd Day.

☽	P	☉	0 42	P.M.
•	P	♅	5 58	
☿	in	♉	7 42	
☽	P	☿	10 53	

4th Day.

☽	S□	♂	2 15	A.M.
•	□	♃	3 29	
•	☌	♅	6 41	
•	☌	☿	8 31	
•	△	♀	2 14	P.M.
•	P	☿	9 9	
•	in	♎	10 39	

5th Day.

☽	P	♅	0 8	A.M.
•	□	♄	2 26	
•	P	☉	8 14	
•	SQ	♀	5 46	P.M.

6th Day.

☽	☌	☉	1 31	A.M.
•	P	♂	5 22	
♀	BQ	♄	7 38	
☽	⚹	♃	8 19	

7th Day.

☽	☍	♂	5 46	A.M.
•	⚹	♄	8 11	
•	S□	♃	11 29	
•	SQ	♅	3 12	P.M.
•	SQ	☿	5 44	

8th Day.

☽	S□	♄	0 1	P.M.
•	P	♄	2 16	
•	P	♆	2 32	
•	△	♅	7 28	
•	△	☿	10 47	

9th Day.

☽	☌	♀	8 4	A.M.
•	P	♀	1 30	P.M.
☉	△	♃	4 52	
☽	SQ	☉	8 28	

10th Day.

☿	BQ	♂	2 52	P.M.
☽	S□	♂	5 5	

11th Day.

☽	☍	♃	1 33	A.M.
•	△	☉	4 6	
•	□	♅	6 1	
☽	□	☿	0 4	P.M.
•	in	♍	9 56	
•	⚹	♂	10 11	

12th Day.

☽	☍	♄	4 5	A.M.
☉	S⚹	♅	4 43	
♂	℞ in	♎	5 51	
♀	QX	♂	10 57	
•	in	♊	3 51	P.M.

13th Day.

☽	SQ	♀	4 53	A.M.
•	in Apg		8 0	
•	⚹	♅	6 49	P.M.
•	□	☉	10 5	
☿	in Aph		11 11	

14th Day.

☽	P	♃	3 44	A.M.
•	P	♄	3 52	
•	⚹	☿	4 38	
•	□	♂	9 10	
☉	P	♂	0 2	P.M.
☽	△	♀	0 14	
•	S□	♃	8 13	

15th Day.

☽	S□	♅	1 19	A.M.
•	S□	☿	1 15	P.M.
☿	QX	♄	9 47	
☽	S□	♄	11 46	

16th Day.

☽	⚹	♃	2 8	A.M.
•	⚹	☉	3 24	P.M.
•	△	♂	7 13	
♂	BQ	♅	8 38	
☽	P	☉	10 6	

17th Day.

☽	□	♀	1 18	A.M.
•	P	♂	3 9	
•	⚹	♄	4 19	
☿	in	♈	0 8	P.M.
☽	S□	☉	10 54	
•	SQ	♂	11 16	

18th Day.

☉	☌	♂	1 59	A.M.
☽	P	♅	2 48	
•	P	☿	10 44	
•	□	♃	11 56	
•	☍	♅	5 9	P.M.

19th Day.

☽	P	☿	2 9	A.M.
•	P	♅	5 36	
•	in	♈	8 0	
•	☍	☿	10 36	
•	⚹	♀	10 38	
☿	⚹	♀	11 4	
☽	□	☉	0 38	

20th Day.

☽	P	♂	5 52	A.M.
☿	□	♄	11 16	
☽	S□	♀	1 46	P.M.
☽	P	☉	5 23	
•	△	♃	8 2	

21st Day.

☽	☌	♂	6 33	A.M.
•	☍	☉	2 32	P.M.
•	△	♄	5 25	
•	SQ	♃	7 57	

22nd Day.

☽	S□	♅	1 17	A.M.
♀	BQ	♂	9 20	
☉	SX	♀	1 41	P.M.
☽	SQ	♄	6 52	
•	P	♄	9 58	
•	P	♆	9 58	
•	S□	☿	11 54	

23rd Day.

☽	⚹	♅	3 0	A.M.
☉	△	♄	6 18	
☽	☍	♀	6 50	P.M.

24th Day.

☽	⚹	☿	3 21	A.M.
•	P	♀	6 50	
•	SQ	♂	8 35	
☉	SQ	♃	5 7	P.M.
☽	☌	♃	11 10	
•	S□	☉	11 44	

25th Day.

☽	□	♅	4 57	A.M.
•	△	♂	8 55	
•	in Peri.		10 0	
•	in	♋	5 4	P.M.
•	☌	♄	9 53	

26th Day.

☽	⚹	☉	2 29	A.M.
•	□	☿	10 20	
•	S□	♀	9 40	P.M.

27th Day.

☽	△	♅	7 25	A.M.
•	□	♂	10 2	
•	P	♄	1 33	P.M.
•	P	♆	1 44	
•	⚹	♀	10 48	

28th Day.

☽	SQ	♃	2 0	A.M.
•	□	☉	8 57	
•	SQ	♅	9 1	
☉	S□	♅	9 23	
☽	△	☿	6 46	P.M.

29th Day.

☽	SQ	♄	2 5	A.M.
•	△	♃	4 8	
•	⚹	♂	0 5	P.M.
•	SQ	☿	11 42	

30th Day.

☿	P	♅	0 50	A.M.
☽	□	♀	1 38	
•	△	♄	4 2	
•	P	♂	8 8	
☿	S□	♀	3 24	P.M.
☽	S□	♂	6 59	
•	P	☿	11 24	

TABLE

SHOWING THE DAILY MEANS OF THE BAROMETER AND THERMOMETER,

FROM JANUARY 21 TO FEBRUARY 19, 1841.

The Sun in Aquarius.

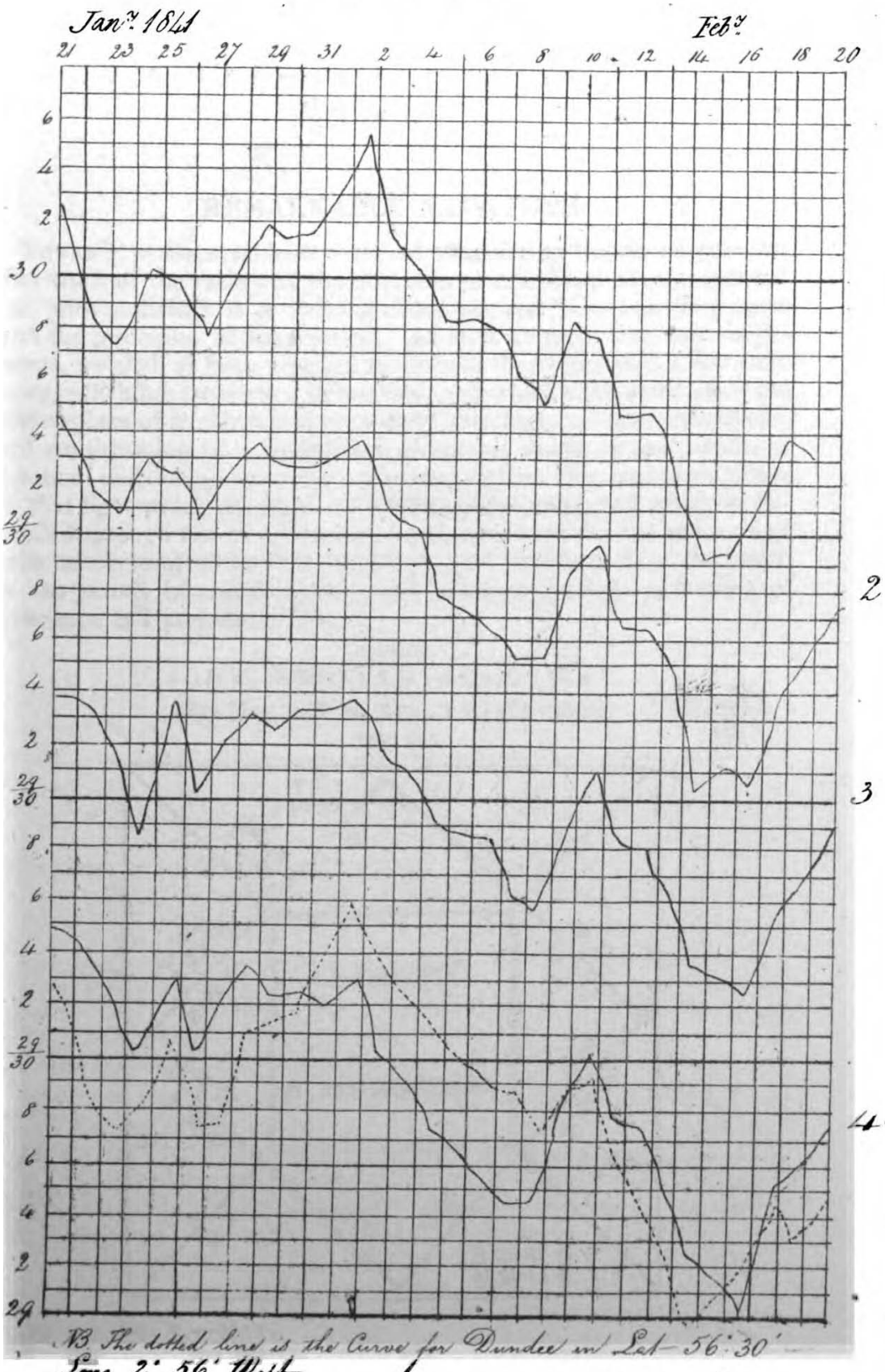
☉ Long	Day of the Month.	Carlisle.		Yarm.		Thetford.		Thwaite.		High Wycombe.		Canter-bury.		London.		Gosport.		General Means.	
	Jan.	Bar.	Thr.	Bar.	Thr.	Bar.	Thr.	Bar.	Thr.	Bar.	Thr.	Bar.	Thr.	Bar.	Thr.	Bar.	Thr.	Bar.	Thr.
♒																			
1°	21	30·22	28·5	30·34	34·5	30·33	27·	30·36	28·	30·28	33·	29·89	32·7	30·25	29·7	30·47	34·5	30·26	31·
2	22	·28	41·2	·01	41·	·20	35·7	·34	35·6	·14	36·	·81	37·5	·35	34·	·34	40·5	·18	37·7
3	23	29·85	34·7	29·95	34·5	29·94	34·2	·13	38·	·01	37·	·60	39·	·12	36·5	·17	38 5	29·97	36·5
4	24	·78	31·5	·97	30·5	·75	31·5	29·83	33·	29·82	34·	·36	35·	29·91	32·7	·03	33·5	·79	32·7
5	25	30·01	29·5	30·20	32·3	30·20	31·5	30·33	31·7	30·16	30·	·81	34·2	30·15	32·8	·30	38·5	30·14	32·5
6	26	29·99	44·	29·93	42·2	29·90	42·	·01	38·5	29·92	46·	·53	46·5	29·95	43·7	·07	46·5	29·91	43·6
7	27	·76	42·4	30·02	42·5	30 02	39·2	·20	46·5	30·04	44·	·67	46·1	30·12	46·2	·20	43·	30·00	43·7
8	28	·99	41·9	·25	40·7	·20	34·	·30	38·	·20	39·	·78	42·	·15	36·	·33	38·5	·15	38·7
9	29	30·19	41·1	·21	34·5	·12	35·2	·24	37·	·11	40·	·72	38·	·12	37·	·24	41·5	·12	38·
10	30	·13	42·6	·27	41·3	——	—	·32	34·	·13	40·	·79	37·3	·14	38·5	·26	41·5	·14	39·3
11	31	·18	39·2	·41	35·7	——	—	·32	31·5	·12	36·	·78	34·8	·13	35·2	·20	35·5	·16	35·4
12	Feb. 1	·34	31·7	·58	31·7	30·32	27·7	·36	27·	·22	27·	·78	28·5	·16	28·	·30	29·5	·25	28·9
13	2	·56	30·7	·31	30·	29·96	25·	·20	26·5	29·90	25·	·45	23·8	·02	24·5	·01	25·	·09	26·3
14	3	·17	30·5	·20	30·3	·98	25·	·12	23·5	·89	18·	·52	18·	29·96	20·7	29·97	22·5	29 99	23·5
15	4	09	30·5	29·97	30·	·78	24·5	29·90	24·	·61	24·	·22	26·9	·81	25·	·72	27·	·76	26·4
16	5	29·84	32·1	30·02	30·	·77	26·5	·89	22·5	·59	26·	·23	26·6	·72	25·7	·67	29·	·71	27·3
17	6	·85	29·1	29·99	29·3	·75	24·5	·84	23·5	·51	25·	·16	25·7	·60	24·5	·57	27·	·65	26·1
18	7	·80	28·1	·88	21·6	·57	23·6	·60	21·7	·36	23·	28·97	24·6	·50	23·	·45	26·	·59	23·9
19	8	·61	30·2	·70	30·	·40	26 5	·55	25·5	·32	25·	·92	29·3	·46	27·	·44	29·5	·42	27·8
20	9	·52	31·3	·92	30·3	·77	27·5	·86	26·5	·68	26·	29·29	29·7	·08	27·	·81	30·5	·69	28·6
21	10	·82	31·1	30·04	28·	·98	28·5	30·10	29·2	·87	28·	·52	30·3	·98	31·	30·01	34·5	·91	30·1
22	11	·76	37·1	29·71	35·5	·78	34·	29·85	32·	·69	37·	·33	37·6	·78	37·2	29 78	40·5	·71	36·3
23	12	·48	42·	·62	42·	·67	37·7	·80	38·5	——	—	·27	44·2	·70	43·5	·74	44·	·61	41·7
24	13	·49	44·1	·41	44·5	·58	40·7	·62	39·5	——	—	·11	44·5	·68	45·5	·51	43·	·48	43·1
25	14	·17	47·1	·08	47·5	·30	42·	·36	44·	·14	47·	28·84	47·3	·37	46.5	·27	45·	·18	45·8
26	15	28·92	43·	·16	44·7	·25	43·6	·35	42·5	·16	44·	·78	46·7	·20	45.7	·17	43·	·12	44·1
27	16	·94	49·9	·24	44·	·18	40·5	·28	44·5	·01	47·	·68	46·3	·06	45·	·08	46·	·10	45·4
28	17	29·16	43·	·52	39·	·40	40·5	·51	39·	·35	39·	·98	44·9	·36	42·	·48	44·5	·34	41·5
29	18	·38	42·2	·48	41·2	·72	44·5	·70	44·	——	—	29·12	48·	·45	46·	·56	45·	·48	44·4
30	19	·32	43·4	·64	47·5	·65	43·5	·80	45·	——	—	·27	46 5	·69	43·7	·73	44·	·58	44·8
Means . . .		29·78	37·1	29·90	36·2	29·80	33·5	29.90	33·7	29·78	33·7	29·37	36·4	29·82	35·1	29·86	36·9	29.78	35·1

J. Cunningham, Printer, Crown-court, Fleet-street, London.

Barometric Curves,

1, Carlisle. 2, Hereford, 3, Thwaite. 4, Gosport

⊙ in ♒



NB. The dotted line is the Curve for Dundee in Lat. 56° 30' Long 2° 56' West